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ABSTRACT

This report describes the Expressive Arts Project, which was designed to develop and demonstrate a developmentally appropriate, activity-based expressive arts curriculum model, that will enable children with disabilities to have access to activities in the arts that are an accepted part of regular early childhood programs in typical settings. The project used both low and high technology adaptations to make it possible for children with moderate to severe disabilities to participate in expressive arts activities. The model contains four elements. Its core element, Children's Experiences in the Expressive Arts, was made possible by the other three: (1) Structure of the Environment, which involves organizations of space, time, and materials; (2) Roles of the Adult, which included facilitating, planning, adapting materials and evaluating; and (3) Resources, such as books, magazines, software, museums, and libraries. The model was field tested at four preschool classrooms, two classrooms with students with multiple disabilities, and one birth-to-three site. During the 5 year period, data was collected on 322 children, 291 families, 13 teachers, and 27 classroom aides. Findings indicate that participating in the Expressive Arts actuated integrated curriculum, with accompanying adaptations, and resulted in positive outcomes for children in cognition, communication, social abilities, expressive arts abilities, and gross and fine motor skills, regardless of age, disability, or initial skill level. (Author/CR)

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ED 415 646

The Expressive Arts Project

A Final Report for the Project Period
October 1, 1992 - November 30, 1997

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The Expressive Arts Project
Abstract

The Expressive Arts Project was developed by Macomb Projects at Western Illinois University in Macomb, Illinois. The major goal was to develop and demonstrate a developmentally appropriate, activity-based expressive arts curriculum model so young children with disabilities have access to activities in the arts that are an accepted part of regular early childhood programs in typical settings. Both low tech and high tech adaptations were used to make it possible for children with moderate to severe disabilities to participate in expressive arts activities.

The Expressive Arts Model contains four elements. Its core element, Children's Experiences in the Expressive Arts, is made possible by the other three: (1) Structure of the Environment, which involves organization of space, time, and materials; (2) Roles of the Adult, which include facilitating, planning, adapting materials, and evaluating; and (3) Resources, such as books, magazine, software, museums, and libraries.

The model was developed during the first 3 years in three preschool sites and two Birth to Three sites. During the third year, the Project underwent an expert review, was found to be effective, then was approved for the final 2 years of field testing. Field test sites were four preschool classrooms, two multiple disability classrooms, and one Birth to Three site. During the 5 year period, data was collected on 322 children, 291 families, 13 teachers, and 27 classroom aides.

Data were gathered from child observations, teacher ratings, parent ratings, videotapes of children, analyses of children's images, and art portfolios. Results support the claim that participating in the Expressive Arts actuates integrated curriculum, with accompanying adaptations, and shows positive outcomes for children in cognition, communication, social abilities, expressive arts abilities, and gross and fine motor activities. The most important finding during field testing in Years 4 and 5 was that, in every case, the children showed a consistent increase in skills over time, regardless of their differing ages, differing disabling conditions, or differences in initial skill levels. This finding is consistent with results during model development.

The Expressive Arts Project developed numerous products, including *ArtExpress*, a 207-page curriculum manual containing 12 chapters plus references, appendices, and an index. *ArtExpress* provides suggestions for incorporating activities in the visual arts, music and movement, and dramatic play. A *Family and Child Art Activity Ideas* booklet is available, as are videotapes, such as the hour-long *The Arts: A Springboard for Learning*. Dissemination activities have included conference presentations, workshops, journal articles, and newsletter articles.

The Expressive Arts Project received Outreach funding beginning October 1, 1997. The primary goal of Expressive Arts Outreach is to train others to integrate developmentally appropriate experiences in the expressive arts into early childhood programs for children ages 3 to 8 with a wide range of disabilities. More information about Expressive Arts Outreach can be obtained by contacting Project personnel at 27 Horrabin Hall, Western Illinois University, Macomb, Illinois 61455; calling 309/298-1634, or checking the Project web page at www.mprojects.wui.edu.

Final Report

The Expressive Arts Project

The Expressive Arts Project (EAP), a model demonstration project, received funding from the United States Department of Education's Early Education Program for Children with Disabilities in 1992. From 1992-1995, the project went through its model development phase. In the Spring of 1995, a review panel evaluated the accomplishments of the Project's first three years, determined that the Project's claims of effectiveness were valid, and recommended the second phase, a two year field-testing period, which began in September 1995 and ended in November 1997.

Goals and Objectives of the Project

Goals

The goals of the Expressive Arts Project included the following:

1. Develop, implement, and demonstrate an effective, replicable Expressive Arts Project Model, based on related research findings and observational learning theory, to ensure that young children from birth to age six with a wide range of disabilities have access to the benefits of integrated arts activities engaged in by young children without disabilities in normalized settings.
2. Enhance the knowledge and skills of these children's families and their local education agency and/or service agency staff so they can effectively use the arts activities with the children.
3. Provide the children with timely recommendations for appropriate integrated arts activities to enhance IFSPs and IEPs and placement in most inclusive settings.
4. Disseminate the model to other schools and agencies across the country so they can replicate the Expressive Arts Project Model.

Objectives

The objectives for the project were divided into Model Development Objectives and Direct Service Objectives. The major objectives needed to accomplish the goals are listed below.

Model Development Objectives

1.0 Develop an effective expressive arts curriculum in the demonstration sites for three groups of children with disabilities from birth to six.

2.0 Develop procedures and products to assist in presentation of activities to children using an observational learning (OL) paradigm.

3.0 Develop effective procedures to work with families of children in the Expressive Arts Project demonstration sites.

4.0 Develop effective staff development procedures and products to train demonstration site teams to use the Expressive Arts Project model in the demonstration sites.

5.0 Develop effective products to assist early intervention teams to implement the Expressive Arts Project Model.

6.0 Disseminate information about the Expressive Arts Project Model.

7.0 Evaluate Expressive Arts Project Model Development objectives.

Direct Service Objectives

1.0 Implement the Expressive Arts Project in demonstration sites.

2.0 Provide information and skills related to Expressive Arts Project families.

3.0 Provide information and skills related to the Expressive Arts Project to the demonstration sites' early childhood teams.

4.0 Evaluate Expressive Arts Project Direct Service Objectives.

Theoretical/Conceptual Framework for the Project

The arts, which are an important part of the regular early childhood education curriculum, have been neglected in special education settings, in spite of the fact that they also offer important benefits for young children with disabilities, representing the activities of normalized settings required by law.[1] Both art and play have important and critical roles in children's growth as

[1]P.L. 101-476, the Individuals with Disabilities Education Act (IDEA) and its amendments of 1991, P.L. 102-119 at the time this Project was proposed and later re-emphasized in P.L. 105-17, The Individuals with Disabilities Education Act Amendment of 1997.

symbol makers (Dyson, 1990a). During the early childhood years children become fluent and inventive users of symbols, including gestures, pictures, drawings, spoken words and written ones (Vygotsky, 1978; Gardner, 1982, Nelson, 1985). The arts are rich in sensory experiences, involving interactive processes that foster a variety of learning (Brittain, 1979; Smilansky, 1968; Heathcote, 1984; Smith, 1984; Wagner, 1988).

The role of the arts in the child's developing ability to deal with abstract symbols is only one of the benefits attributed to art activities. Jalongo (1990) reviewed the benefits for young children stemming from the expressive arts. Participating in the arts fosters "learning from the inside out," authentic learning that changes behavior, encourages reflection, and enhances the child's ability to interpret symbols (Heathcote, 1984; Fein, 1987; Hoffman & Lamme, 1989). Further, the expressive arts are associated with growth in all areas of development, including academics (Courtney, 1982; Sylva, 1984; Wagner, 1988). When the child participates in the expressive arts, that child is regarded as a meaning-maker and constructor, a discoverer and an embodiment of knowledge rather than a passive recipient of someone else's ready made answers (Bruner, 1986; McLaren, 1986; Wells, 1986).

The importance of drawing or painting, of making marks, affects the child's developing abilities, including the ability to produce abstract symbols even though those marks are often unrecognizable by adults Brittain, 1979; Dyson, 1986; Dyson, 1990a, 1990b; Gardner, Wolf & Smith, 1982; Wells, 1986; Jalongo, 1990; Kellogg, 1970; Lowenfeld & Brittain, 1975; Rosenblatt & Winner, 1989). Art is the "symbolic ability of the child on which everything which is distinctly human will develop" (Smith, 1984, p. 28). At the same time, experts in early childhood education emphasize the need to encourage curricular intervention techniques that teach skills in a natural environment through age appropriate activities (Bricker, 1988; McDonnell & Hardman, 1988; Odom & Warren, 1988). Data from a High/Scope study indicates that a quality preschool curriculum is based on child-initiated activities (Schweinhart & Weikart, 1986). An activity-based or experience-based curriculum is gaining headway as approved practice in the early childhood community (Bredekamp, 1987; NAEYC & NAECSSDE, 1991) among regular educators and

special educators. Bricker (1988), looking ahead to changes in intervention approaches for the 1990's, predicted that program structure would take increased advantage of naturally occurring environmental events and children's self-initiated activities. Offering activities in the arts addresses both self-initiation and the characteristics and experiences available in the child's natural environment.

Arts for children without disabilities focus on the processes and outcomes of child-directed activities, exploration of a variety of materials, and the expectancy that children progress through a regular sequence of images from scribbles to recognizable objects and people (Kellogg, 1970; Lowenfeld & Brittain, 1975). While Kellogg (1970) believed that all children pass through the same progression of making symbols, she suggested that the exceptions are children with severe physical and mental disabilities. We would argue that perhaps those children have not had enough opportunities to participate in child-directed drawing and painting because of the nature of their disability.

Technology applications (i.e., computers and graphics/drawing software) which can be accessed with a single switch activated by the head, knee, foot, or hand, make it possible for children with severe disabilities to draw with color and to print a hard copy of their drawings using a color printer. This trend, as well as a trend toward greater child initiation of activities (Bredekamp, 1987; Bricker, 1988; NAEYC & NAECSSDE, 1991) was addressed in the Expressive Arts Project.

Children with disabilities are afforded little time to explore materials and participate in child-initiated expressive arts activities for many reasons, sometimes because there are "more important things to do." While art activities have a place in curriculum activities for children with disabilities, the arts are likely to be viewed as vehicles to meet a specific therapeutic objective (e.g., finger painting for children who are tactilely defensive) and tend to be adult-directed (e.g., teaching children to draw diamonds with 'proper' corners or recognizable trees using an adult image or coloring in a coloring book image drawn by an adult). Regular early childhood educators view the arts as a positive contribution, emphasizing child-initiation, exploration of materials, and providing

time for the child to develop his or her own visual art symbols (Hyson, 1985). Special education staff sometimes use art in preschool programs but underestimate the potential benefits to be gained when young children engage in arts activities.

The concept of the arts and the relationship to emergent literacy represents a relatively new approach in special education. Viewing making marks or representing an animal through movement as part of the child's ability to deal with representation, and eventually to literacy, are related. Overtime, the meaning of a mark changes from making a scribble, to a house, a person, a mock letter, and identifiable letter, then a word. These marks emerge during drawing and painting and the pattern occurs not only with "typical" children, but also with those who have disabilities. Recent research shows that concepts of literacy can be developed by even very young children with disabilities (Fitzgerald & Needlman, 1991; Katims, 1991 & 1994; Klenk, 1994; Koppenhaver, Coleman, Kalman, & Yoder, 1991; Pierce & McWilliams, 1993).

The arts are increasingly recognized as playing important roles in the development of young children as shown in Reggio Emelia's conception of the "hundred languages of children" (Edwards, Gandini, & Forman, 1994) and in Gardner's (1980 & 1993) propositions related to multiple intelligences. Reggio Emelia, a preschool in Italy, is being increasingly touted in the United States as a model for all preschools. The Illinois State Board of Education, recognizing the importance of this integrated approach which is based extensively on the arts, sponsored a series of state-wide workshops for early childhood personnel and families in 1995 related to Reggio Emelia practices.

The Expressive Arts Project was based on the assumption that omitting or down-playing the arts in early intervention programs is a disservice to young children with disabilities and their families. Since the arts are part of early childhood curriculum for children **without** disabilities, then the arts, with appropriate adaptations, should be a part of the curriculum for children **with** a wide range of disabilities. Adaptations, including computers, peripherals, software, videodiscs, larger and/or longer brush handles and crayons that can be held in the palm of the hand were employed in the Project to integrate the arts into our demonstration sites. Adaptations made it

possible for children with moderate to severe disabilities to participate in the activities that engaged their less disabled peers.

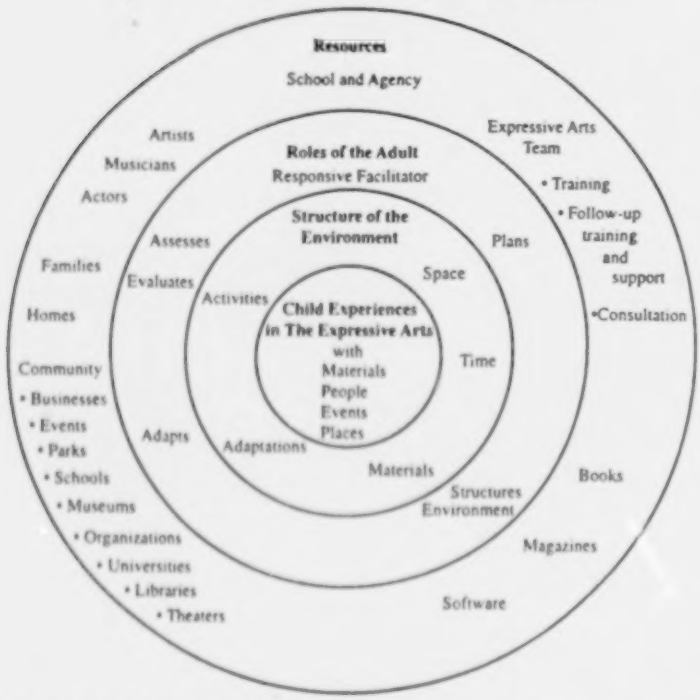
Description of the Model and Participants

The elements of the model are shown in Figure 1. The model includes families, children, staff, and a wide range of resources. The core element of the model, "Children's Experiences in the Expressive Arts," is made possible by a set of three enfolding elements including the "Structure of the Environment," the "Roles of the Adult," and, in the outer ring, "Resources."

The core element, "Children's Experiences in the Expressive Arts," provides a set of activities organized into a curriculum designed to incorporate experiences in the arts into naturally occurring, ongoing daily events. The term "curriculum" is defined here as a set of guidelines and suggested experiences, not in the narrow academic sense sometimes used in the elementary and secondary schools (Hutinger, 1994). *ArtExpress* , the tested model curriculum developed by the Expressive Arts Project, blends the philosophies of NAEYC and DEC to provide appropriate and effective teaching strategies and intervention techniques for families and teachers of young children with disabilities. The philosophy of *ArtExpress* was based on several assumptions derived from *Guidelines for Appropriate Curriculum Content and Assessment in Programs Serving Children Ages 3 through 8* (NAEYC, 1991). First, developmentally appropriate materials and arts activities for young children are essential. Second, young children, with or without disabilities, need the freedom to develop their own symbols and ideas rather than adult-prescribed symbols and ideas. Third, young children need access to raw materials which can be used in many different ways. Fourth, young children need ample time to participate in art processes. Fifth, adaptive materials for the arts are possible given the technology now available. Finally, art activities can be integrated into a variety of other content areas.

Rather than looking at a child's diagnostic label, the Expressive Arts Project (EAP) observed what each child **could** do. Schutter and Brinker (1992) recommend that classification systems be based on descriptions of actual behavior of children that typifies their response to specific situations and contexts. Schutter and Brinker also recommend that characterizing

Figure 1. The Expressive Arts Model



individuals on the basis of "ability to regulate state, focus attention on specific tasks, display affect, and respond to and produce symbolic communication" (p. 95) is more appropriate than labeling children on the basis of their disabilities. The Expressive Arts model provided activities that encouraged an approach which views characteristics of child behavior, no matter what the disabilities or cultural differences. Further, as suggested by Schutter and Brinker, "the goal for classifying the child's behavior observed in specific contexts is to provide intervention shown to improve the behavior in those contexts" (p 96). Art activities used by the Expressive Arts Project focused attention on a specific task, such as painting, and encouraged children to communicate through their images.

The second ring or model element, "Structure of the Environment," focuses primarily on physical elements such as appropriate organization of space, time and schedule, and materials. Also included are adaptations of materials and activities that can be used differently by different children, depending upon specific needs and developmental levels.

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The next element is titled "Roles of the Adult," whether that be teacher, program assistant, support staff, or family members. This element includes the role of the responsive facilitator, planning, structuring activities, adapting materials and activities, and evaluating. Adults are responsible for the structure in the "Structure of the Environment" element.

The outer element, "Resources," includes the surrounding supports that make EAP viable: the resources of the sponsoring school or agency, families, homes, communities, museums, theaters, libraries, artists, musicians, actors, books, magazines, and software. Also included are training, follow-up training and support, and consultation provided by the EAP team.

Participants during Model Development (Years 1, 2, and 3)

The Expressive Arts Project integrates developmentally appropriate activities in the arts into early childhood experiences for preschool-aged children with mild to severe disabilities. During Years 1, 2, and 3, the EAP staff trained staff from three preschool sites and two Birth to Three sites, and they participated in curriculum model development. With one exception, these sites became continuation sites during Years 4 and 5.

Early Childhood Demonstration Sites

Stone School in Galesburg, Illinois, served 3-5-year-olds. At the beginning of the project, the site housed two Early Childhood Special Education classes, each serving between 9 and 14 children. Each class met for 2 1/2 hours, 5 days a week. In 1994-1995, the program met 5 days a week with the 4 to 5-year-olds integrated into the Pre-Kindergarten (Pre-K) classrooms 4 days a week. In 1995-1996, only the 3-year-olds met 5 days a week. In 1996-1997, 23 children were integrated into Pre-K inclusion classrooms 4 days a week. Program assistants were assigned to specific children in these classrooms. The two teachers floated as needed and collaborated with classrooms teachers.

Industry Preschool, Industry Community Unit District #165 Early Childhood Special Education Program in Industry, Illinois, served 3-5 year old children 5 days a week. Between 7 and 10 children with special needs were served in a 3 hour program. A teacher and program assistant staffed the room. A one-on-one aide was employed in 1996-1997.

Colchester Preschool, Colchester Community Unit District #180 Early Childhood Special Education Program in Colchester, Illinois, served 13 children 3 to 5 years old with special needs The program had a morning and afternoon class. Each session met 5 days a week for 3 hours. A teacher and program assistant staffed the program.

Birth to Three Demonstration Sites

Bridgeway in Macomb, Illinois, a 2-day a week program, served 10 children under 3 years old and met for 2 hours. Three Child Development Specialists staffed the program.

Warren Achievement Center-Monmouth served 10 children in a once a week program. Parents accompanied their children to the program which originally met for 1 hour, then expanded to meet for 2 hours. Two Early Interventionists staffed the program. Speech therapy, physical therapy, and occupational therapy were also provided.

Participants during Field Testing of the Model (Years 4 and 5)

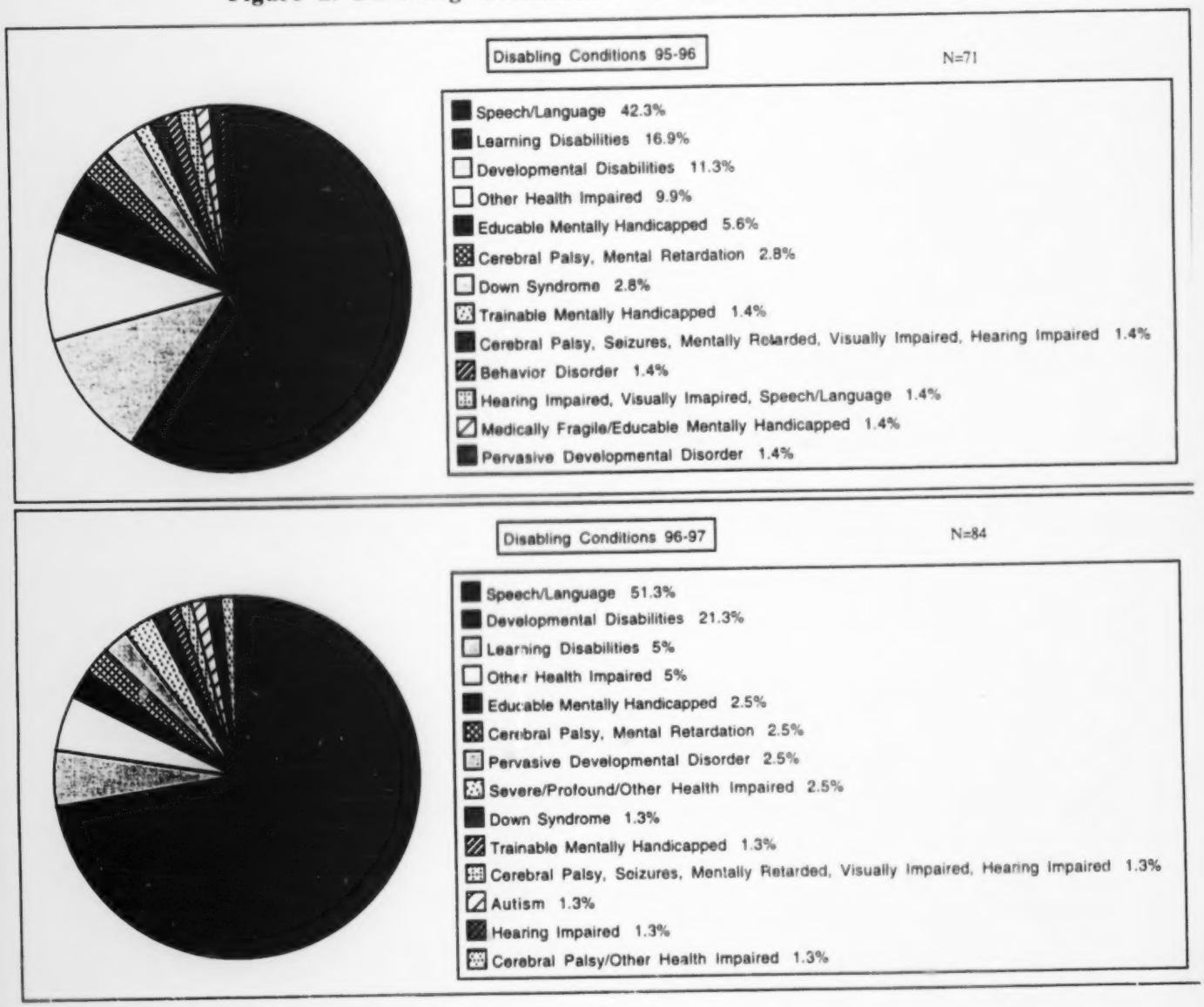
During Years 4 and 5, EAP staff trained site staff from seven new sites. EAP staff field tested the curriculum model in four preschool sites, two multiple disability classrooms, and one Birth to Three site. Figure 2 shows pie charts listing various child disabilities for 1995-1996 and for 1996-1997.

Early Childhood Field Test Sites

Three sites were located in one building, MacArthur School, Macomb Community Unit District #185 Early Childhood Special Education Program in Macomb, Illinois. **MacArthur Preschool Classroom #1** was an inclusion classroom. Eighteen children were in the classroom; 8 children had no disabilities. The 10 children with special needs participated in the Expressive Arts program. One teacher, one program assistant, and two one-on-one aides staffed the special education program. The classroom also had a Pre-K teacher and a Pre-K program assistant. The special education teacher and the Pre-K teacher co-taught. **MacArthur Preschool Classroom #2** served nine children with special needs, had one teacher, one program assistant, and one one-on-one aide. **MacArthur Preschool Classroom #3** served 10 children with special needs and had one teacher and one program assistant. All three classrooms met 4 days a week for 2 1/2 hours each day.

Speech/Language, OT, and PT services were available for the three MacArthur classrooms, and children needing those services were taken out of the classroom on an ongoing basis.

Figure 2. Disabling Conditions 1995-1996 and 1996-1997



Plymouth Preschool, Southeastern Community Unit District #337 Early Childhood Special Education Program in Plymouth, Illinois, served 20 children with disabilities. The program

operated a morning and afternoon class. Each session met 5 days a week for 3 hours. A teacher and program assistant staffed the program.

Colchester (Western Illinois Special Education Cooperative) (referred to in this report as Colchester Cooperative) had six children, ranging in age from 3 to 10 years, each having severe multiple disabilities. One teacher, one program assistant, and three one-on-one aides worked with the children 5 days a week all day. Three of the four children spent an hour each day in another classroom in the school. One child went to the preschool classroom, one to the Pre-K classroom, and one to the first grade classroom. A Physical Therapist and the K-12 art teacher worked with the children in their own classroom, and all four children joined the Pre-K group for music weekly.

Ferris (West Central Illinois Special Education Cooperative) served 9 children ages 3 to 8 with multiple disabilities. One teacher, one program assistant, and four one-on-one aides staffed the program. Speech and Physical Therapy were offered on site on an ongoing basis.

Birth to Three Field Test Site

Warren Achievement Center-Galesburg served 10 children in a once a week program. The program met for 1 1/2 hours. Two Early Interventionists staffed the program. Parents accompanied their children to the program. Speech therapy, physical therapy, and occupational therapy were also provided.

Total Participants

It was not uncommon for children to move in and out of programs rather quickly as families moved and circumstances changed. Some families were involved with the Expressive Arts Project for more than one year. Sixteen children attended both Expressive Arts Birth to 3 Sites and Expressive Arts Preschool Sites. Some families had more than one child in an early childhood program. Data was collected on 120 children during the first three years of the Expressive Arts Project. With the addition of children from field test sites, data was collected on 118 children in Year 4 and 130 children in Year 5, with 46 children enrolled in both years. Data was collected on 202 new children during Years 4 and 5. During the 5 year period, data was collected on 322

different children. Table 1 shows the number of teachers, families, and children served each of the 5 years of the Expressive Arts Project. Over the 5 years of the Expressive Arts Project, 291 different families, 13 teachers, and 27 aides were impacted.

Table 1. Teachers, Families, and Children Served

Galesburg AM Class				
	T	A	C	F
92 - 93	2	2	13	14
93 - 94	2	2	14	12
94 - 95	2	2	15	15
95 - 96	2	3	20	19
96 - 97	2	3	17	17

Galesburg PM Class				
	T	A	C	F
92 - 93	2	2	9	9
93 - 94	2	2	11	11
94 - 95	2	2	13	13
95 - 96	2	3	13	13
96 - 97	2	3	7	6

WAC - Monmouth				
	T	A	C	F
92 - 93	1	1	9	7
93 - 94	1	1	12	7
94 - 95	1	1	14	12
95 - 96	1	1	19	19
96 - 97	1	1	10	10

Bridgeway 0-3				
	T	A	C	F
92 - 93	1	3	10	10
93 - 94	1	3	17	17
94 - 95	1	3	13	13
95 - 96	1	3	19	19
96 - 97	1	3	11	11

Unit Dist #165-Industry				
	T	A	C	F
92 - 93	1	1	7	7
93 - 94	1	1	7	7
94 - 95	1	1	9	6
95 - 96	1	1	9	9
96 - 97	1	2	11	11

Unit Dist # 180 Colchester				
	T	A	C	F
92 - 93	1	1	13	13
93 - 94				
94 - 95				
95 - 96				
96 - 97				

Unit Dist #337-Plymouth-AM				
	T	A	C	F
92 - 93				
93 - 94				
94 - 95				
95 - 96	1	1	5	5
96 - 97	1	1	8	6

Unit Dist #337-Plymouth-PM				
	T	A	C	F
92 - 93				
93 - 94				
94 - 95				
95 - 96	1	1	6	6
96 - 97	1	1	6	7

WCISEC/Colchester				
	T	A	C	F
92 - 93				
93 - 94				
94 - 95				
95 - 96	1	3	4	4
96 - 97	1	3	6	6

Unit Dist #185-Macomb-site 1				
	T	A	C	F
92 - 93				
93 - 94				
94 - 95				
95 - 96	1	3	8	8
96 - 97	1	3	12	12

Unit Dist #185-Macomb-site 2				
	T	A	C	F
92 - 93				
93 - 94				
94 - 95				
95 - 96	1	3	15	15
96 - 97	1	3	12	12

Unit Dist #185-Macomb-site 3				
	T	A	C	F
92 - 93				
93 - 94				
94 - 95				
95 - 96	1	1	14	14
96 - 97	1	2	11	11

WAC - Galesburg				
	T	A	C	F
92 - 93				
93 - 94				
94 - 95				
95 - 96	1	1	10	10
96 - 97	1	1	13	13

West Cen IL Sp Ed Coop-Ferris				
	T	A	C	F
92 - 93				
93 - 94				
94 - 95				
95 - 96				
96 - 97	1	4	10	11

* Some teachers, aides, children, and families were involved for more than 1 year.
* Total of different families impacted over 5 years (291).

T = Teachers
A= Assistants
C= Children
F= Families

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Methodological or Logistical Problems and How They Were Resolved

Change in Content Emphasis

As a result of a NEC*TAS consultation with Tanya Suarez which occurred in November 1993, curriculum development was redirected to visual arts as the primary focus, with the majority of music, movement, and dramatic play being addressed through thematic units in the curriculum model. Thematic units that included the visual arts, music, movement, and dramatic play were developed and used at all sites.

Change in Age Group Focus

A second result of the NEC*TAS consultation was that the major emphasis of the curriculum was focused on the three to five age group. Due to circumstances beyond our control, the service delivery strategies of the Birth to Three sites limited the amount of time for center-based activities and thus reduced the time allotted to art activities. We continued to work in the birth to three programs but reduced the number of our visits.

Observational Learning

Another change related to the observational learning (OL) paradigm was changed from our original plan. Videotapes to stimulate participation in the arts were not needed in Years 1, 2, and 3 because all the children in our sites participated! Although we made the observational learning videotapes as we proposed, surprisingly we had little opportunity to test them during the model development phase. We did not have a single child in the 120-plus children we saw during the first 3 years who did not want to participate in the art activities, although a few were initially reluctant to get their hands painty or sticky when an activity began. The overwhelming majority of children in the sites participated in the art activities willingly and spontaneously, although some demonstrated greater interest in the arts than others.[2]

Even when we tested graphics software with children who demonstrated severe disabilities in a classroom that was not a demonstration site, the children not only used the TouchWindow but

[2]We classified children as having high, moderate, or low interest in art on the basis of our observations during their stays in the art center at the demonstration sites.

they spent greater lengths of time on task without adult direction than their teachers expected — enough time that administrators came to see what was going on and expressed astonishment!

However, observational learning **did** occur on an almost daily basis. Rather than watching the OL videotapes, the children watched each other, then tried the same thing or something similar and sometimes extended the activity in a different direction.

The observational learning videotapes were planned for use with children who had severe and multiple disabilities. When the proposal was written, we believed that more children in the Galesburg site would demonstrate severe physical disabilities since they were present in the caseload at the time. Yet during the 3 years of demonstrating the model, for unknown reasons, Galesburg did not enroll more severely involved youngsters, although the children there demonstrated disabilities more severe than those in Industry or Colchester, where the bulk of the children were eligible because of speech and language delays.

During field testing of the model in Years 4 and 5, the Observational Learning video tapes were used in the Colchester Cooperative classroom. The children attentively observed the activities on the video. One of the children vocalized to the television monitor as he manipulated similar art tools and materials. The OL video tapes, along with daily inclusion activities, supplemented opportunities for chilfen to observe other children participating in child-initiated art activities.

Technology Adaptations

Originally we focused primarily on the computer[3], with peripherals, or art materials with low-tech adaptive devices, as adaptations for children who could not use standard art materials. When children in the Demonstration sites turned out not to have the anticipated severe disabilities, our focus changed. Computers, and their accompanying peripherals and software can serve either as a necessary tool for art participation for children with severe disabilities or as another medium for expression for others. During EAP model development, technology served not so much as a tool but as another art medium since few children with severe physical disabilities were enrolled in the sites. Those who were orthopedically impaired had use of their hands and arms and did not need adaptations.

[3]The terms "technology" and "computers" will be used interchangeably in this report.

Later, children with severe and multiple disabilities at the EAP Field Test sites in Ferris and Colchester used computers with adaptive peripherals. The technology became an important tool for the expressive arts. *Kid Pix* was used with both the TouchWindow and kidDraw to create visual images that were printed and displayed along with traditional children's art. Switches, IntelliKeys, and Key Largo were used so children could interact with software that included music and dramatic play elements.

The computer center was a popular place for all children. Of particular interest is the fact that when children in Industry were introduced to two new graphics software programs (*EA*Kids Art Center* and the graphics portion of *HyperStudio*), they transferred their knowledge of the *Kid Pix* tool and paint palettes and their skill in using that software to the other programs with ease, in spite of summer vacation away from school. This finding is consistent with research Hutinger (1987) reported on Logo in preschool programs.

Prenatal Chemical Exposure

We originally intended to work with children who experienced prenatal chemical exposure. However, the reality of the situation was that parents did not provide the schools with information on prenatal exposure to chemicals. Therefore, we could not identify these children. While teachers suspected prenatal exposure to be the case with some children, no supportive documentation was available. This is in keeping with parents' right to privacy.

Sharing Centers

Another change, reported in the 1993 continuation proposal, was made in relation to operating Sharing Centers. We found that parents did not have enough time to participate as much as we had hoped. We then held "Art Parties," thinking the name might be more appealing, at the same time inviting children with and without disabilities from the community. Two State funded Resource and Referral Centers in the region, one in Galesburg (Bright Futures) and the other in Macomb, gave area families and teachers access to free art materials and toys and equipment from their lending libraries. Bright Futures in Galesburg also had weekly child and family make it-take it events called "Try It On Tuesday."

Many EAP site staff invited us to conduct "Art Parties." The Parent Coordinator of one early childhood site that houses three field test classrooms asked EAP staff to organize and facilitate an "Art Party" two years in a row. "Art Parties" were well attended and received, but our most successful family interactions were when we "tagged on" to each site teacher's planned family involvement events. EAP staff involvement with these events ranged from organizing the art activities for the event to facilitating and being a guest. The types of events ranged from teacher versions of the "Art Party" concept to visits to pumpkin patches, and farms, picnics, computer software exploration, open houses, and make it-take it events. EAP staff took many opportunities to interact with the families of children in the sites. EAP staff collected family data with a Family Questionnaire at the beginning of the school year and a Family Satisfaction Questionnaire at the end of the school year.

Although the Sharing Center concept did not work well in the demonstration sites, integrating art information and activities into school functions for families did. However, asking families to fill out the family art competencies seemed presumptuous, so we omitted it from our original plan.

Developing formats for parent-child interactions at home was accomplished through *ARTtaché*. These were take-home bags of expressive arts materials along with a note inviting families to work with their children to create art projects which could then be brought to school and discussed with other children in the class. Included in the *ARTtaché* was a comment page for the family to fill out and a page that the children can draw or write about what materials they liked best. Family information from *ARTtaché* was supplemented with a *Family Questionnaire* in the Fall and a *Family Satisfaction Questionnaire* in the Spring. Both questionnaires included expressive arts information about the children and their families. A booklet of suggested *Summer Expressive Arts* ideas supplemented the monthly *ArtExpress Family Newsletters*.

Changes in Evaluation

Although changes were made in the original evaluation plan, we believe the effect was minimal. A major factor affecting changes was uncertainty and delay resulting from the serious

illness of the evaluator originally proposed. However, data was collected the entire time from multiple sources including field notes from observations of classrooms and individual children, anecdotal records, together with structured and unstructured interviews with families and staff. Methods included videotapes; counts of occurrences of responses; lists of people, events, and agencies; individual reports; and art products. As proposed, we evaluated three components: children, families, and staff.

As we gathered data and experience in the model, it became more and more apparent that the evaluation plan we originally proposed nedessitated using elements of a qualitative approach incorporating naturalistic evaluation. This approach is based on a different set of concepts than more traditional quantitative study (Lincoln & Guba, 1985, 1989; Merriam, 1988; Tesch, 1990). The technical assistance visit from Tanya Suarez, supported by NEC*TAS at the beginning of the project's second year, supported the qualitative approach. The evaluation approach was refined, targeting fourth-generation, or emergent, evaluation procedures as detailed by Lincoln and Guba (1989) when possible.

During model development we carried on extensive evaluation activities. Portfolios were compiled for each of the 120 children who were in the project three months or longer. Portfolios were also maintained on the 19 children, who were in the project less than three months. Using Kellogg's (1970) developmental stages, we analyzed images from 120 children during their stays in the programs.[4] However, such in-depth analysis was too time consuming for classroom teachers or program staff to cover during field testing. The number of images produced and collected contributed to an inordinate expenditure of time in evaluation and analysis. Because of this, the bulk of the evaluation effort targeted the visual arts, although videotapes of integrated music and dramatic activities exist. However, we believed that, with simplification, the evaluation concept was viable. During field testing of the model, EAP staff refined both the *Visual Art Developmental Checklist* and the *Visual Art Rating Scale* and developed a *Visual Art Image*

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[4]Images were analyzed according to 17 placements, 20 types of scribbles, 17 types of emergent diagrams, 6 types of diagrams, combines, aggregates, radials, mandalas, suns, sun faces, seven types of human figures, 4 categories of pictorials, and emergent writing.

Assessment guide, based on the Kellogg stages. Our site teachers reported that the Kellogg stages of image development were useful to them in explaining child products and development to families.

Another change in the evaluation plan involved omitting test scores. Originally we intended to include Brigance and Battelle scores in the evaluation. However, since Brigance and Battelle test scores were collected sporadically by teachers, we determined that they were neither useful nor essential in documenting the effects of EAP.

During Years 4 and 5, teachers were trained to collect and analyze visual art images, collect data, and fill out the *Visual Art Developmental Checklist* and the *Visual Art Rating Scale* on each child. Teachers also reported to EAP staff with samples of activity plans, counts of expressive arts activities in the classroom, and child responses.

Research or Evaluation Findings

Evidence of the effectiveness of the EA model is contained in the *Site Visit Report* (May 1995), original data, and field test data demonstrating results similar to results collected during model demonstration. The *Site Visit Report* notes the following:

> *The early intervention Expressive Arts Project...has developed a model to increase children's participation in art activities, quality of their art products, and development of collateral skills. This model is built upon a sound theoretical base...the strengths of the project include:* ***documented improvement in children's art abilities; parent and teacher reports of improvement of collateral skills including emergent writing, attention span, language, social skills, problem solving, and self management;*** *increased positive interactions between parents and children in non-school settings; enhanced parent perception of their child's competence; increased opportunities for sibling interactions during art...encourages children's exploration and learning through multisensory activities. The report also notes that the model produces "increased public awareness resulting from displays of art products and 'art parties;' systematic support of teachers' current practices and innovative ideas; and increased use of low cost, previously discarded material as art media."*

Highlights of Year 4 and 5 Evaluation Summary

Nature of the data. Data were gathered from child observations, teacher ratings, parent ratings, videotapes of children participating in variety of activities, analyses of children's images, and the art portfolios maintained for each child from the beginning to the end of the year.

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Instruments used in the Expressive Arts Model, included the *Visual Arts Developmental Checklist*, the *Visual Art Rating Scale*, and the *Child Visual Art Image Assessment*, which provide a standard tool for evaluating arts products produced by children with disabilities and provide the field with additional useful assessment tools. Both qualitative and quantitative measures were used. Staff changes were reported through the use of *Site Staff Competencies* and *Model Fidelity*.

Portfolio assessment data collected during the first 3 years of the project during model development and field testing indicated that youngsters with disabilities progress through the same stages of image development as do "typical" children with differences only in rate. These findings were corroborated by the field testing during Years 4 and 5.

Growth in children's knowledge and abilities. One of the most gratifying results of this program has been the **consistent patterns of growth shown by children at all of the sites**, whether new field test sites or continuation sites, over the past 2 years while they were receiving project services. A major finding of this project was that during the past 5 years, **all children, even those with multiple disabilities, participated in the arts activities at all of the project sites. Not one refused.** Comments by both teachers and parents also indicate that the children enjoyed their participation in the Expressive Arts activities:

> *"The kids really loved it. They'd meet us at the door with 'What are we gonna do today?'"*
>
> Teachers noted *"Our parents now let their kids do more. One said that she'd never thought about doing "that kind of thing" before."*
>
> The teachers admitted that the project led to an increase in their knowledge base. *"Maybe our attitudes changed in that we began to see the kids as more capable. We've really tried to use the arts—music and visual art, especially."*

Data collected over the two-year period from the field test replication sites support the findings reported by the review team after they examined the data from the three previous years of model development and demonstration. The claim that the results of participating in EA actuates integrated curriculum, with accompanying adaptations, and shows positive outcomes for children in aspects of cognition, communication, social abilities, expressive arts abilities, and gross and fine motor activities was supported by the field test data.

Each year teachers rated children in their classrooms at three separate times throughout the year, (October, February, and May) and rated each child on cognitive, communication, social, gross motor, fine motor, and visual arts skills. The teachers were provided with specific criteria on which to rate the children to provide objective guidelines for their evaluations.

Because the information was gathered from children of different ages and having differing disabilities ranging from mild to severe, each classroom of children started at different points on the measurement scale. Regardless of their starting point, **children at all sites showed growth over time in <u>all</u> areas.**

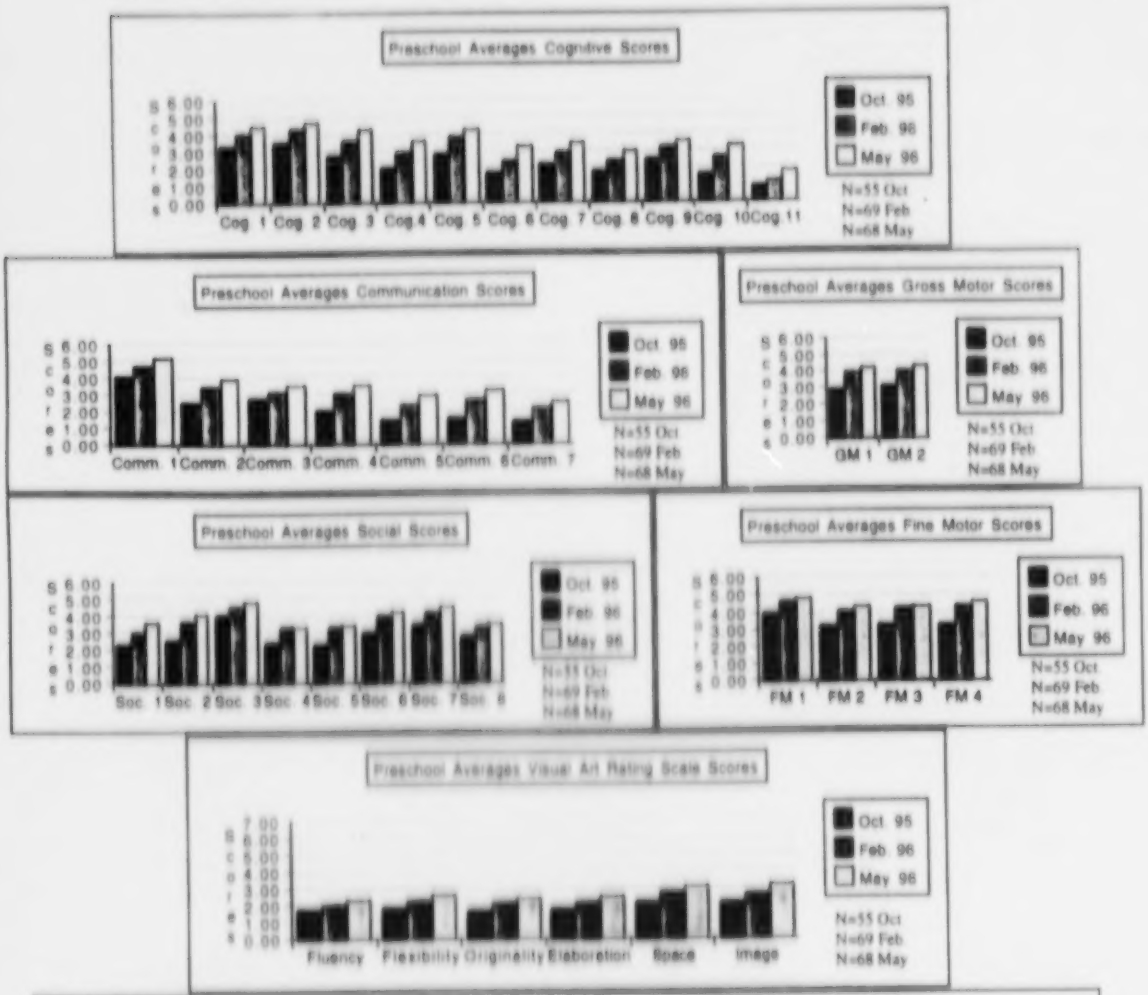
Figure 3 (1995-1996) and Figure 4 (1996-1997) show the steady increase in children's scores, indicating positive growth on all measures over each of the past two years. Those sites with children having the most severe conditions showed the smallest amounts of growth over the year; however, even the most severely involved children still showed improvement in all areas over the year as a result of being involved in the Expressive Arts Project.

Cognition. One of the areas of greatest interest was to see what changes in cognitive growth occurred in the children who participated in the Expressive Arts Project. One of the reasons for this project was to note the positive benefits to children, including those children with either mild and more severe disabling conditions, not just in the narrow area of visual and expressive arts themselves, but also how expressive arts effects broader areas of general cognitive growth and development.

As Eisner (1997), Fiske (1997), and other researchers have shown, the expressive arts provide a solid foundation that assists children in developing their other cognitive abilities. Teachers integrating art activities into the curriculum for young children use art to generate joy in learning, develop critical thinking, and help students communicate their feelings (Fiske, 1997). These results are the same as those identified by teachers and parents whose children participated in Macomb Projects' Expressive Arts Project.

In general, children at all of the sites showed solid growth over the year in the area of cognition. Figure 5 shows some sites, such as those with the youngest children (e.g. Galesburg

Figure 3. 1995-1996 Child Gains at All Sites in 6 Different Areas of Growth


Preschool Averages Cognitive Scores
Oct. 95
Feb. 96
May 96
N=55 Oct
N=69 Feb
N=68 May
Cog. 1 Cog. 2 Cog. 3 Cog. 4 Cog. 5 Cog. 6 Cog. 7 Cog. 8 Cog. 9 Cog. 10 Cog. 11
Preschool Averages Communication Scores
Comm. 1 Comm. 2 Comm. 3 Comm. 4 Comm. 5 Comm. 6 Comm. 7
Preschool Averages Gross Motor Scores
GM 1 GM 2
Preschool Averages Social Scores
Soc. 1 Soc. 2 Soc. 3 Soc. 4 Soc. 5 Soc. 6 Soc. 7 Soc. 8
Preschool Averages Fine Motor Scores
FM 1 FM 2 FM 3 FM 4
Preschool Averages Visual Art Rating Scale Scores
Fluency Flexibility Originality Elaboration Space Image

Cog. 1 = Uses a variety of materials
Cog. 2 = Participates in visual arts activities
Cog. 3 = Engages in a variety of new as well as routine classroom activities
Cog. 4 = Demonstrates flexibility and resourcefulness during expressive arts activities
Cog. 5 = Increases time on task
Cog. 6 = Demonstrates knowledge of basic concepts
Cog. 7 = Develops mental images (representation)
Cog. 8 = Increases number of symbols (fluency)
Cog. 9 = Uses materials in a variety of ways (flexibility)
Cog. 10 = Develops recognizable symbols
Cog. 11 = Adds detail to drawings, paintings, and sculptures
Comm. 1 = Listens and understands simple directions
Comm. 2 = Listens and understands more complex instructions
Comm. 3 = Communicates for different reasons
Comm. 4 = Talking or signing with peers and adults increases
Comm. 5 = Recognizes association between spoken and written words
Comm. 6 = Uses symbols or scribbles to "write"
Comm. 7 = Writes using mock letters, real letters or both

Social 1 = Demonstrates initiative in expressive arts activities
Social 2 = Follows rules and routines
Social 3 = Uses classroom materials appropriately
Social 4 = Adjusts to transitions
Social 5 = Stays on tasks and seeks help when encountering a problem
Social 6 = Interacts positively with peers in play
Social 7 = Interacts easily with familiar adults
Social 8 = Seeks adult help when appropriate to resolve conflicts
Gross Motor 1 = Uses large muscle, whole arm movement in art activities
Gross Motor 2 = Crosses the midline when drawing, painting, or constructing
Fine Motor 1 = Grips drawing and painting tools appropriately according to ability
Fine Motor 2 = Uses wrist motion when drawing or painting
Fine Motor 3 = Draws or paints with a relaxed grip on tools
Fine Motor 4 = Scribbles or markings stay on the paper

Visual Art Rating Scale
Fluency = Repeats a single mark, scribble, or image on numerous products over time
Flexibility = Experiments with a variety of new marks and images
Originality = Demonstrates a fresh, independent, inventive approach when putting marks and images on paper
Elaboration = Details are added to images
Space = Demonstrates awareness of the relationship between the image made and the size and shape of the paper
Image = Communicates through images or symbols

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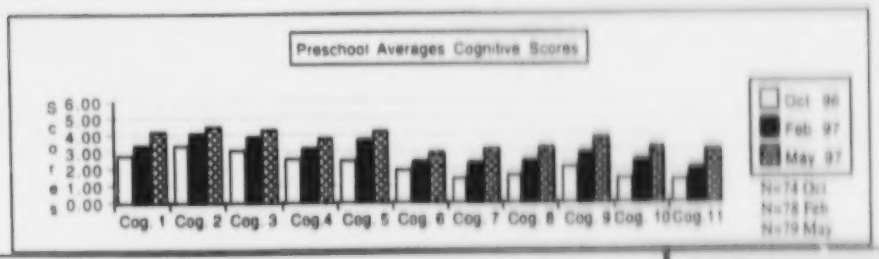
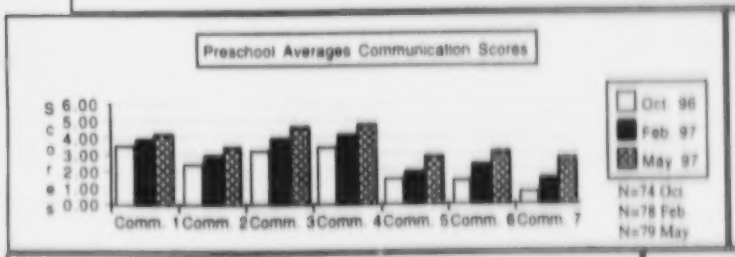
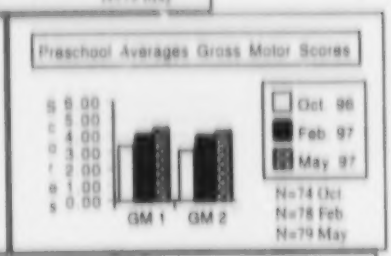
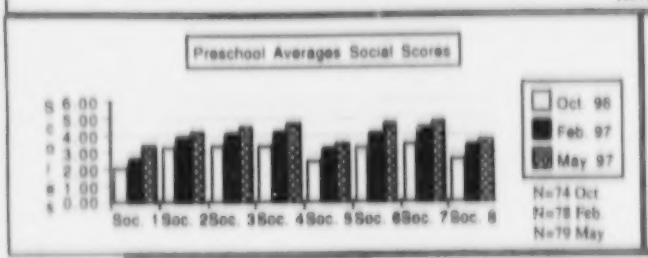
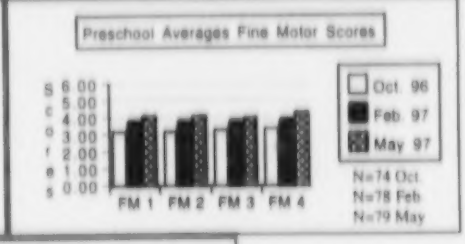
Figure 4. 1996-1997 Child Gains at All Sites in 6 Different Areas of Growth











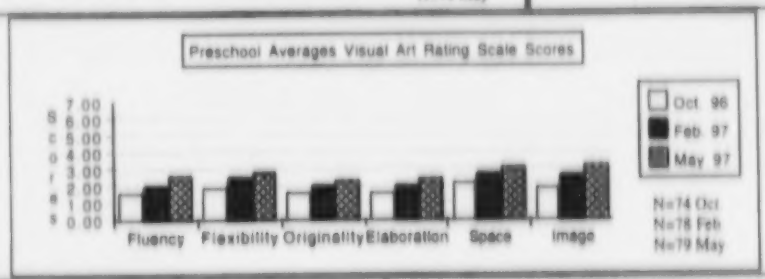


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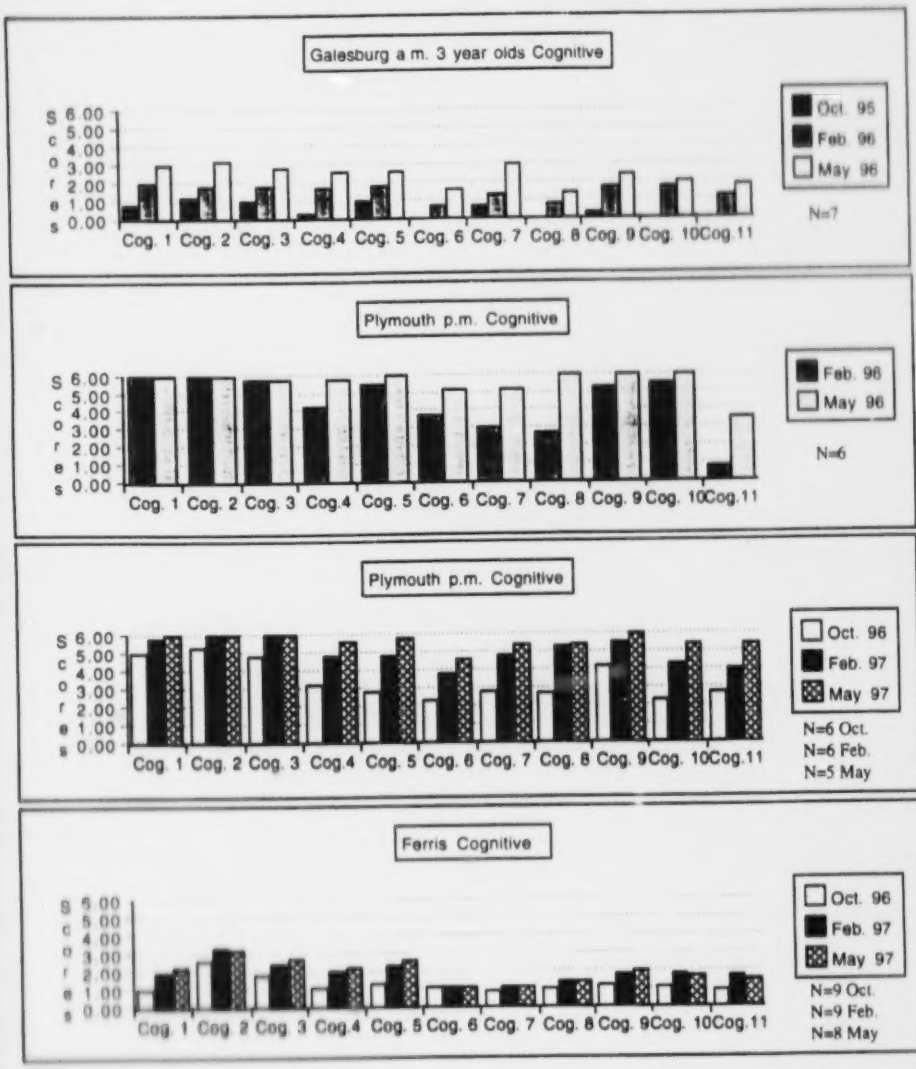
Figure 5. Galesburg, Plymouth, and Ferris Cognitive Growth



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a.m., which served three-year-olds), had many scores of zero initially, but had few scores of zero by the end of the year and showed very impressive growth over the time period. There were wide discrepancies between sites in terms of where children were on the cognitive scale. Some sites (Plymouth p.m.) began the year with scores already at ceiling levels, and thus had little room for improvement. This site had older children with fewer severe disabling conditions. The site with the most severely-involved children (Ferris) showed the smallest amounts of growth over the year.

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However, even these students did show improvement over the course of the year in **all** of the sub-areas of cognition.

When the data from all sites are combined, the overall data clearly show marked gains in cognitive growth throughout the whole period of the Expressive Arts Project. The data summary figures also show that the items on the cognitive scale are nicely rank ordered with students scoring higher on items 1 and 2, for example, than items 10 or 11. This shows good item arrangements, in approximate developmental order, on the scale.

Communication. Communication skills underlie the development of all later literacy behaviors as well as providing children with expressive ways to interact with the people in their environment. Communication skills allow them ways to think about and relate to the world around them.

A goal of this project was to demonstrate the positive benefits of expressive arts in the broader areas of general growth and development in language skills, including several areas related to emergent literacy (recognizing the association between spoken and written words, using symbols or scribbles to "write", and using mock letters, and real letters in art work). When the Expressive Arts model began, project staff predicted that letters and letter-like forms would appear in children's art. Both checklist scores and examination of portfolio contents have supported these expectations. Scores on the *Visual Arts Rating Scale* showed progress over time across more than 130 children. Although the scores were not high to begin with, images increased in marks, experimentation, inventiveness, details, awareness of the relationship between the image and the size and shape of paper, and communication. The scores reflect the reality that many of the children produced a wide range of symbols and placements, but progressed slowly toward making recognizable images, although the images these children made followed the same cross-cultural progression found in "typical" children by Kellogg (1970) and others. One example to support this finding is that of Shawn, who has multiple disabilities. Shawn played with play dough throughout the year. At times, as expected, the activity was one of exploration and manipulation. However, he made balls, snowmen, and a taco image similar to one made by another individual at

the clay table (an excellent example of the spontaneous observational learning that occurred during Expressive Arts activities.)

Teachers observed positive changes in children. During an independent evaluator's interview, one teacher reported that Expressive Arts activities allow children to *"become creative and more flexible. They are not afraid of new activities...and have more confidence."* Another teacher reported, *"A year ago, I'd have said language improves. Now, I think it is their creativity and sense of joy."* Another reported, *"One day we were building with some large blocks* (three dimensional art) *and one of the kids decided his structure was a bank. Next thing, other kids were borrowing money, opening a restaurant, running a taxi service. It was really great to just let them go with their imaginations."*

Children's scores on the communication assessments at the different sites differed greatly. For example, Figure 6 demonstrates scores from Galesburg a.m., Galesburg p.m., and Colchester. At the Galesburg a.m. site with 3-year olds, only the first three out of seven items had scores above zero during the first assessment period, with the highest score still in the low range of 2 (on a 6-point scale). Likewise, the Colchester Cooperative site started with similar low initial scores (lots of zeros) as did the children at the Galesburg p.m. site. All three of these sites had children with scores of zero on one or more of the communication items. While the children at the Galesburg p.m. site had just one zero score, the other initial scores were all 1 or lower with the exception of one score of 2. All of the relatively low scores of these children in the area of communications may be explained by the fact that both Galesburg sites had the youngest children involved in the program (These classes consisted of only 3-year olds, as opposed to classes that had older children at the other sites). The Colchester Cooperative site had children with much more severe disabling conditions, including multiple disabilities.

Figure 7 shows two sites that had children who initially scored in the middle range of the communication scores. However, even those sites containing some of the children with the most severe disabling conditions did show growth over the year, including several sites with children with autistic behaviors that would especially affect their ratings on measures of communication.

Figure 6. Galesburg and Colchester Communication Growth

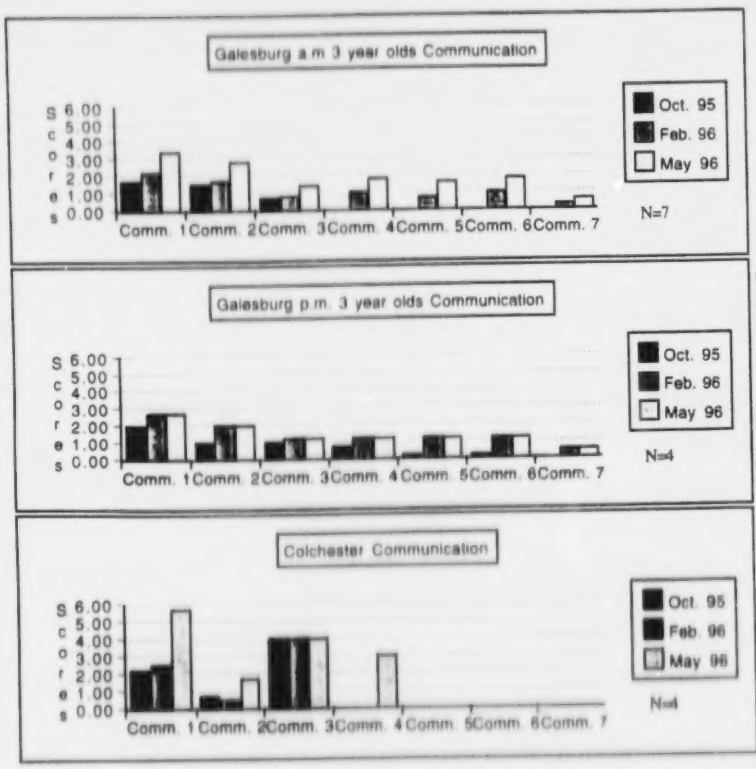

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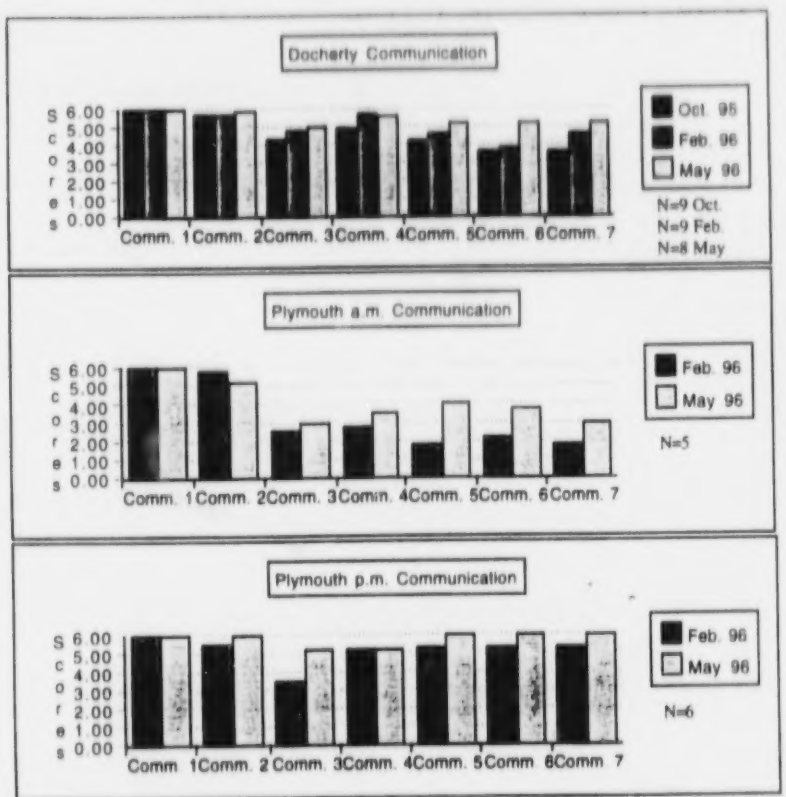
Figure 7. MacArthur #3 and Plymouth Communication Growth



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The other sites all had high and in some cases ceiling-high scores on the communication items, even during the initial assessment, which occurred in October. In fact, three sites (MacArthur—Docherty, Plymouth a.m., and Plymouth p.m.) had one or more items with initial scores at the top of the scale (6).

Of most importance, **at all sites implementing the Expressive Arts Curriculum** and across all variations in age, disabling conditions, and teachers, **children's scores in communication either stayed the same** (this happened rarely—usually due to being at ceiling levels already) **or improved** in every category on every communication item over the course of the assessments. It is also interesting to note that the children's communication scores progress in a mostly hierarchical fashion with items 1, 2, and 3 preceding development in items 4 through 7, indicating that the assessment measuring device does a good job of rank ordering the actual developmental levels of growth in children's skills in this area. For example, several sites had zero scores on some of the items during the initial testing. The zero scores were always on the last four items on the communication scale, never on the first three.

Project staff observed two distinct types of child communication/language behaviors emerge while children were interacting with visual arts materials: (1) the child who verbalizes while working with materials; and (2) the child who becomes so focused on the activity that language is infrequent. This supports Gardner's (1980) research on patterners and dramatists. When the second type of child was asked to verbalize, this child would lose focus on the activity. Observations showed that children remain engaged at the art center longer and stay more actively involved if an adult is present at the art center or involved in the art activity.

Social development. Social ratings included such items as showing initiative in the arts activities, following rules, using materials appropriately, adjusting to transitions, staying on task, interacting positively with peers and adults, and seeking help from adults when appropriate.

The area of social development showed wide variation across sites. For example, in Year 4, Galesburg a.m. had only one item with a score rating **above** 1 in October. Again, this was one of the sites with the youngest children (all 3-year olds). They showed good growth in this area,

however, and by May, **all** of their social scores were **above** 1, and most were close to 2 or higher. The following year, during Year 5, the new children's scores began higher, with most of them over 1, but only one score higher than 2 in the fall. By Spring, however, all scores were over 3, with several scores in the 4 - 5 range, thus showing great gains in social skills over the course of their year in preschool.

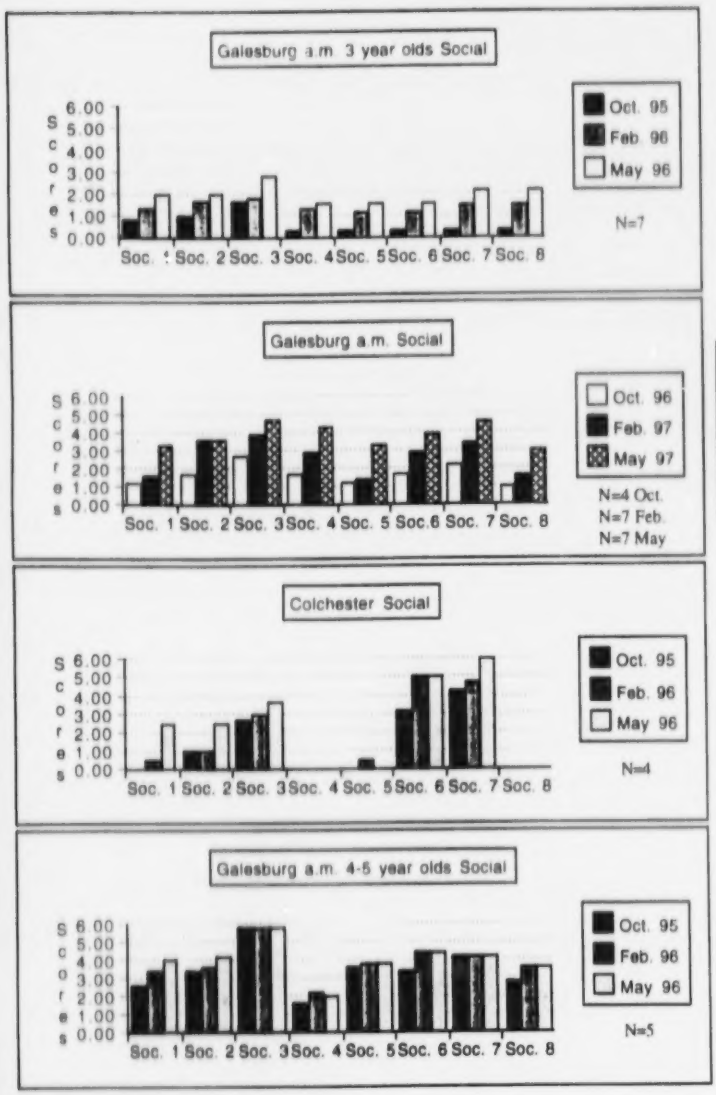
Some sites, such as Colchester (with many children with severe disabling conditions) and Galesburg a.m. (4- and 5-year-olds) had very erratic scores with zeros on some items, but had near-ceiling level scores of 5 and 6 on other items in the area of social development during Year 4. They made especially impressive growth over the year, with some items increasing nearly three points on a six point scale from the beginning to the end of the year. Figure 8 shows social growth for Colchester and three Galesburg classrooms.

Those groups that tended to have older children or children with less severe disabling conditions tended to have higher scores in the social area. For example, MacArthur-Docherty began the year with very high skills (ratings ranging from 4 - 6) across all items in the area of social development and ended with every item score rising up to the highest score interval between 5 and 6, with several ceiling scores of 6.

Gross motor development. Two items were considered: (1) did the child use large muscle, whole arm movements in art activities, and (2) did the child cross the midline when drawing, constructing, and painting.

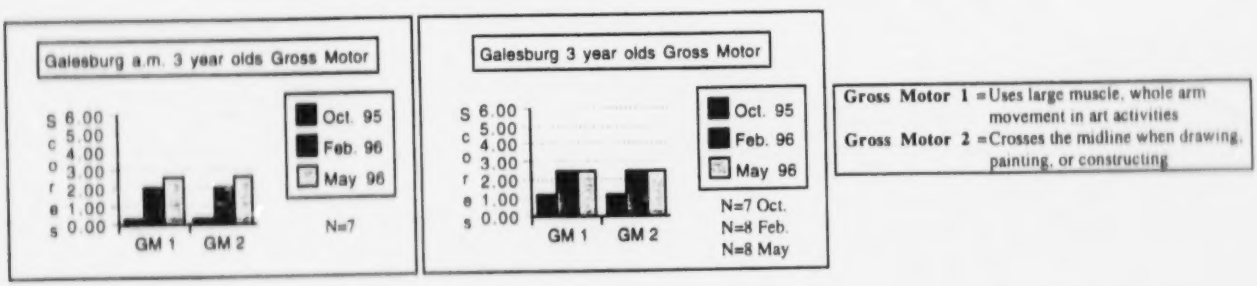
At every site, children showed good, and in several cases, impressively big increases in their use of gross motor development as defined above. Some sites (Galesburg 3-year-olds) tended to show big leaps during the winter, with small (or no) increases shown in the spring. This can be seen in Figure 9. The majority of other sites showed consistently large increases except for sites where the children were already at ceiling levels.

Figure 8. Colchester and Galesburg Social Growth



Social 1 = Demonstrates initiative in expressive arts activities
Social 2 = Follows rules and routines
Social 3 = Uses classroom materials appropriately
Social 4 = Adjusts to transitions
Social 5 = Stays on tasks and seeks help when encountering a problem
Social 6 = Interacts positively with peers in play
Social 7 = Interacts easily with familiar adults
Social 8 = Seeks adult help when appropriate to resolve conflicts

Figure 9. Galesburg a.m. Gross Motor Development



Gross Motor 1 = Uses large muscle, whole arm movement in art activities
Gross Motor 2 = Crosses the midline when drawing, painting, or constructing

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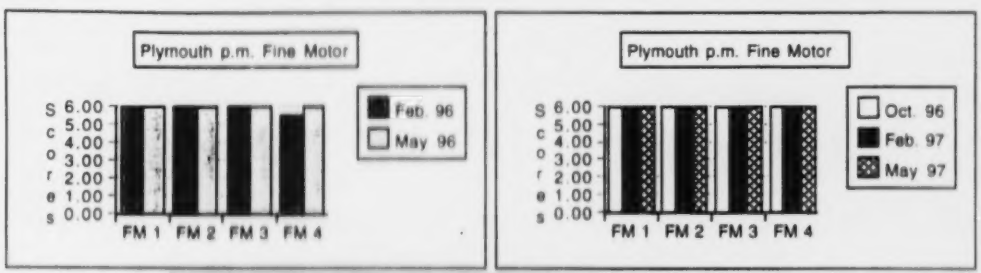
Fine motor development. Four elements were considered: (1) did the child use appropriate grip of art tools, (2) did the child use wrist motion when painting, (3) did the child use relaxed grip on tools when doing artwork, and (4) did the child keep markings on the paper.

Children at all of the sites showed good development in this area. Figure 10 shows that at one site (Plymouth p.m.), the group scores were already at ceiling level in the fall, and thus stayed there all year. At every other site, including those containing the children with the most severe disabling conditions, data shows increases over time.

Figure 10. Plymouth Fine Motor Development



Visual Art Rating Scale

The visual art rating scale rated children on a five-point to seven-point scale on six different measures: (1) Fluency, (2) Flexibility, (3) Originality, (4) Elaboration, (5) Space, and (6) Image (symbols). All groups improved over time on these six measures. There was an interesting tendency for children to show growth in "image—communicating through images or symbols" and to a lesser extent "space—demonstrates awareness of the relationship between the image made and the size and shape of the paper" before showing growth in such areas as "fluency." This scale was one on which none of the children were at or near ceiling levels, with most children in the lowest quartile of the possible score range. Thus, this scale is measuring things that many of these young children are not yet able to do with great expertise and would be able to show growth over time.

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Computer as Art-tool

Children enjoyed using the computer as an image-making tool. Their frequent usage of exploratory computer software led to improvements in time-on-task, eye-hand coordination, symbol recognition, and group interaction. Using high tech technology such as computer graphics software and appropriate peripherals reflects a useful adaptation for children with severe physical disabilities and equalizing their opportunities to participate in inclusion activities. Computer applications in the Expressive Arts model are specific to the arts. Adaptive peripherals are used for children on an individual basis.

The computer proved to be a good way for Serena, a child with a mild disability (Speech/Language), to work on cooperative problem solving and communication. She and other children explored software together, and the following year Serena became the "class expert," assisting younger children as they navigated her favorite expressive arts programs, such as *Kid Pix* and *Thinkin' Things*.

James, a child with multiple disabilities, made images on the computer using *Kid Pix* and recreated images using "The Studio" program from *ArtSpace* and adaptive peripherals. By trying different adaptations, such as a Big Red switch, a TouchWindow, and kidDraw, we discovered that kidDraw (with an overlay simulating the *Kid Pix* draw screen) was the tool that James could use most successfully. James was able to make the connection between his movements with the stylus and the marks that appeared on the computer screen. As he worked, he told the teacher, *"Draw."* James also knew when he was successful stating, *"Did it!"* Serena and James' knowledge and skills benefited from using the computer as an expressive arts tool. Examples of James' artwork can be seen in Figure 11. Serena and James' growth over time can be seen in the Expressive Arts Project Case Study video.

Overall Summary Of Child Data

When the scores of children at all of the different sites are summed together and looked at on a composite basis there is absolute growth on every sub scale of every area. (See Figure 3. 1995-1996 Child Gains at All Sites in Six Different Areas of Growth [based on scores of numbers

Figure 11. James' Artwork

Marker Drawing (09-17-96)

Chalk Drawing (10-01-96)

Drawing with Cray Pas (10-14-97)

Collage with Glue Stick (10-21-96)

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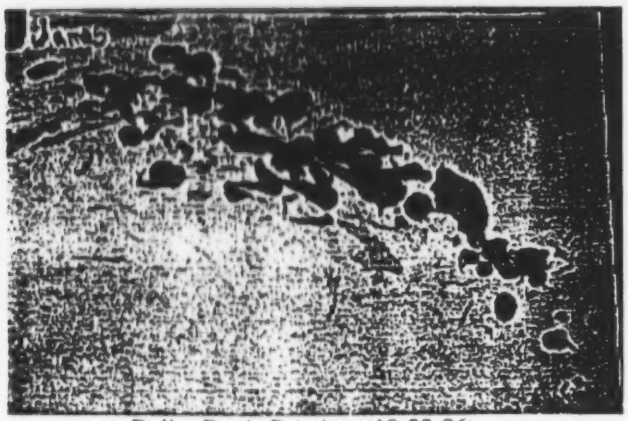
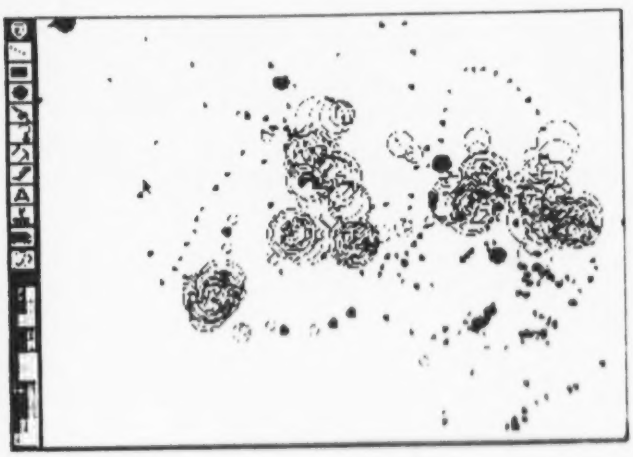
Figure 11. James' Artwork (continued)

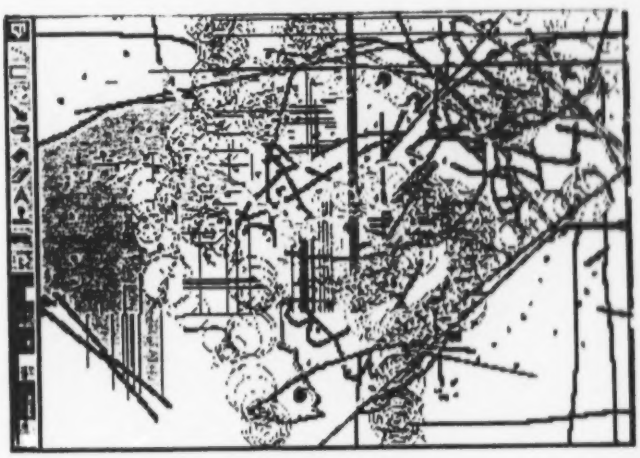


Roller Bottle Painting (10-22-96)

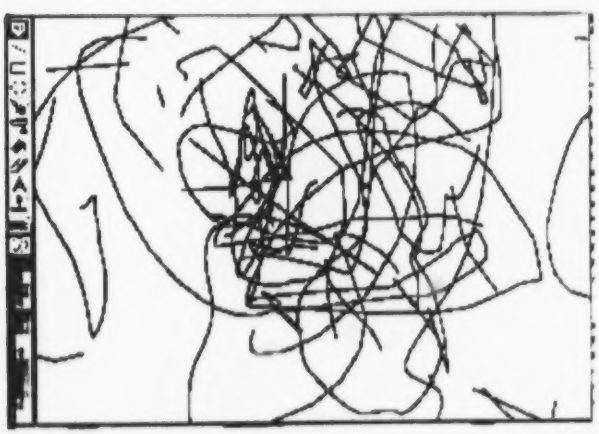
Kid Pix painting
using the mouse
(10-23-96)



Kid Pix painting
using the mouse
(10-24-96)



Kid Pix painting
using kidDraw
(12-03-96)



Kid Pix drawing
using kidDraw
(12-17-96a)

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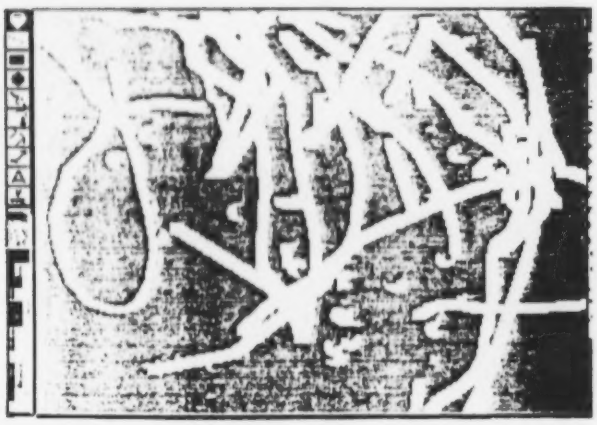
Figure 11. James' Artwork (continued)



Kid Pix drawing
using kidDraw
(12-17-96b)

Chalk Drawing (12/96)

of children ranging from 55-69] and Figure 4. 1996-1997 Child Gains at All Sites in Six Different Areas of Growth [based on the scores of numbers of children ranging from 74-79]). It is impressive that there is **always improvement** shown from every assessment period to the next. In most cases, the growth is quite consistent, creating stair-step graphs, from one evaluation period to the next, with approximately even growth shown.

The most important finding of data collection during Years 4 and 5, is that in every case, **the children show a consistent increase in their skills over time, regardless of their differing ages, differing disabling conditions, or differences in initial skill levels.** Thus, the Expressive Arts Project provided all of the children in these preschool programs with a good educational foundation that is leading to growth in not only items directly related to the visual arts, but also to more general growth in such areas as cognition, communication skills, social skills, gross motor, fine motor, and also the specific visual arts rating scale behaviors.

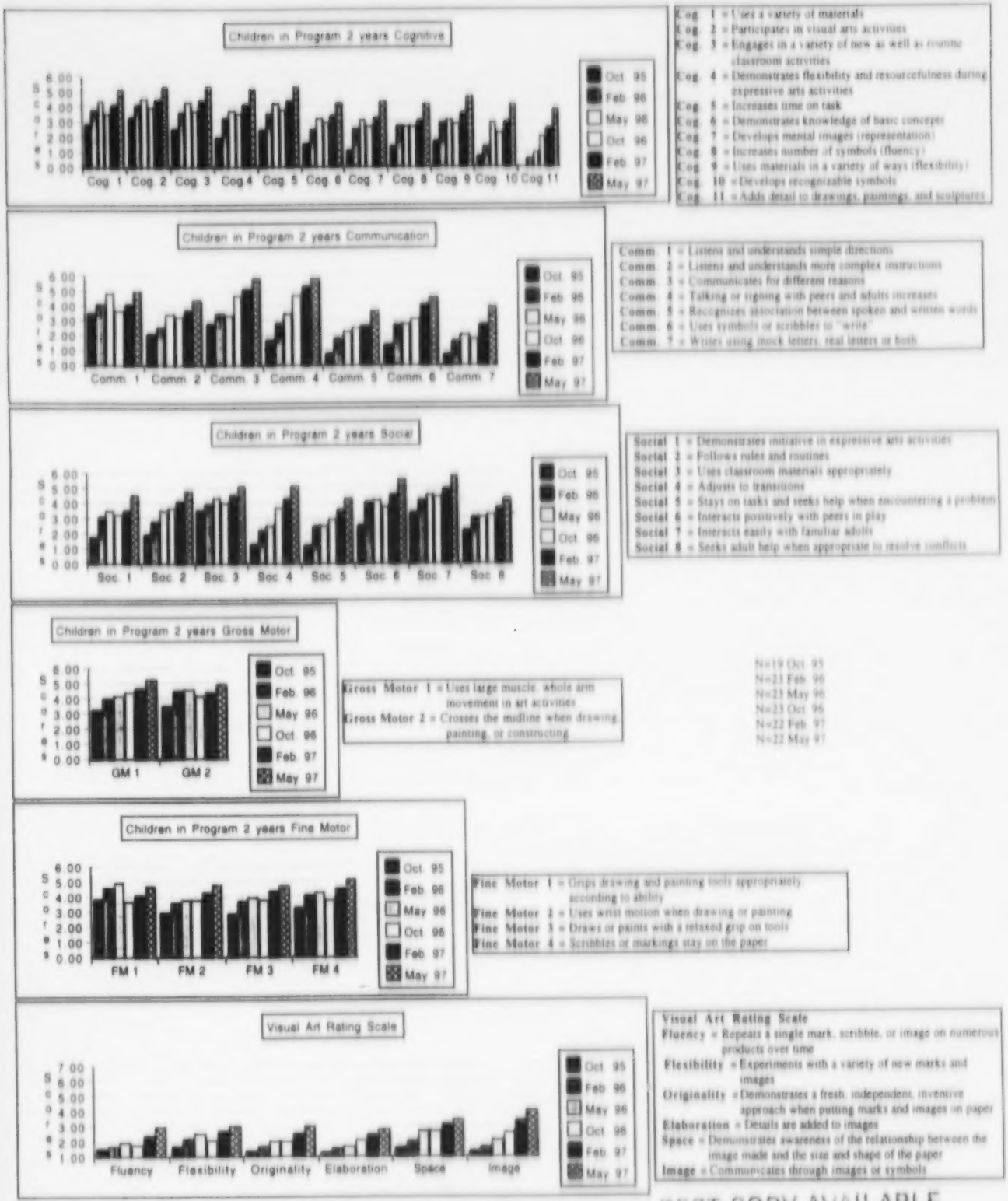
"Summer Slump"

Preschool children with mild to severe disabilities showed decreases in learning when *not* attending preschool during the summer. Figure 12 shows a "Summer Slump" in the scores of those children who were involved in the Expressive Arts curriculum for more than one year during Years 4 and 5. For this group, which consisted of approximately 20 children in seven different classrooms, there are not only scores from Year 4's three measurement points in time of October 1995, February 1996 and May 1996, but also data collected from Year 5 during the October 1996, February 1997, and May 1997 measurement periods. These data allow observers to see which child behaviors may be due to mere maturation and growth over time, and which, if any, seem tied to what they are learning in their school situation using the Expressive Arts curriculum.

The most striking result in looking at all of the data from the six different sub scales used to measure the children's growth (in the areas of Cognition, Communication, Social Skills, Gross Motor, Fine Motor, and the Visual Arts Rating Scale) is that *there is a definite slump in scores noted in most of the items on nearly all of the different assessment areas found after the summer hiatus from preschool. The October score is nearly always lower than the score from the previous May.*

Teachers of school-age children have noticed that they lose ground on cognitive measures over the summer, but it was not clear that these same changes would be noticed in children at these younger ages who were developing basic skills in mostly pre-academic subject areas. If the changes that were happening during the year were due to the passage of time and were due to regular developmental maturation, there would be even stages of growth shown over the summer, represented in a stair-step progression of scores from one testing period to the next, or even a slight increase, since there is a longer time period involved (5 months from May to October, versus only 3 months from February to May). However, with few exceptions, such as gross motor large muscle activity, the overall pattern of growth in all six areas measured is a **decrease** in the child's rating in October, compared to their previous growth. (Note also that the measurements were made by the same teacher on the same child each year.)

Figure 12. "Summer Slump"


Children in Program 2 years Cognitive
Scores
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Cog 1 Cog 2 Cog 3 Cog 4 Cog 5 Cog 6 Cog 7 Cog 8 Cog 9 Cog 10 Cog 11
Oct. 95
Feb. 96
May 96
Oct. 96
Feb. 97
May 97
Cog. 1 = Uses a variety of materials
Cog. 2 = Participates in visual arts activities
Cog. 3 = Engages in a variety of new as well as routine classroom activities
Cog. 4 = Demonstrates flexibility and resourcefulness during expressive arts activities
Cog. 5 = Increases time on task
Cog. 6 = Demonstrates knowledge of basic concepts
Cog. 7 = Develops mental images (representation)
Cog. 8 = Increases number of symbols (fluency)
Cog. 9 = Uses materials in a variety of ways (flexibility)
Cog. 10 = Develops recognizable symbols
Cog. 11 = Adds detail to drawings, paintings, and sculptures
Children in Program 2 years Communication
Scores
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Comm. 1 Comm. 2 Comm. 3 Comm. 4 Comm. 5 Comm. 6 Comm. 7
Oct. 95
Feb. 96
May 96
Oct. 96
Feb. 97
May 97
Comm. 1 = Listens and understands simple directions
Comm. 2 = Listens and understands more complex instructions
Comm. 3 = Communicates for different reasons
Comm. 4 = Talking or signing with peers and adults increases
Comm. 5 = Recognizes association between spoken and written words
Comm. 6 = Uses symbols or scribbles to "write"
Comm. 7 = Writes using mock letters, real letters or both
Children in Program 2 years Social
Scores
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Soc. 1 Soc. 2 Soc. 3 Soc. 4 Soc. 5 Soc. 6 Soc. 7 Soc. 8
Oct. 95
Feb. 96
May 96
Oct. 96
Feb. 97
May 97
Social 1 = Demonstrates initiative in expressive arts activities
Social 2 = Follows rules and routines
Social 3 = Uses classroom materials appropriately
Social 4 = Adjusts to transitions
Social 5 = Stays on tasks and seeks help when encountering a problem
Social 6 = Interacts positively with peers in play
Social 7 = Interacts easily with familiar adults
Social 8 = Seeks adult help when appropriate to resolve conflicts
Children in Program 2 years Gross Motor
Scores
6.00
5.00
4.00
3.00
2.00
1.00
0.00
GM 1 GM 2
Oct. 95
Feb. 96
May 96
Oct. 96
Feb. 97
May 97
Gross Motor 1 = Uses large muscle, whole arm movement in art activities
Gross Motor 2 = Crosses the midline when drawing, painting, or constructing
N=19 Oct. 95
N=21 Feb. 96
N=23 May 96
N=23 Oct. 96
N=22 Feb. 97
N=22 May 97
Children in Program 2 years Fine Motor
Scores
6.00
5.00
4.00
3.00
2.00
1.00
0.00
FM 1 FM 2 FM 3 FM 4
Oct. 95
Feb. 96
May 96
Oct. 96
Feb. 97
May 97
Fine Motor 1 = Grips drawing and painting tools appropriately according to ability
Fine Motor 2 = Uses wrist motion when drawing or painting
Fine Motor 3 = Draws or paints with a relaxed grip on tools
Fine Motor 4 = Scribbles or markings stay on the paper
Visual Art Rating Scale
Scores
7.00
6.00
5.00
4.00
3.00
2.00
1.00
Fluency Flexibility Originality Elaboration Space Image
Oct. 95
Feb. 96
May 96
Oct. 96
Feb. 97
May 97
Visual Art Rating Scale
Fluency = Repeats a single mark, scribble, or image on numerous products over time
Flexibility = Experiments with a variety of new marks and images
Originality = Demonstrates a fresh, independent, inventive approach when putting marks and images on paper
Elaboration = Details are added to images
Space = Demonstrates awareness of the relationship between the image made and the size and shape of the paper
Image = Communicates through images or symbols

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Summary Comment

The most striking thing about these results is that they help support the conclusion that many behaviors the children showed improvement in over the course of the year, **were** due to the provision of the Expressive Arts curriculum and not just due to the passage of time. This evidence shows that the kinds of stimulation and experiences that the children receive at home over the summer months may be perfectly adequate in the areas of gross motor skill development and certain general areas of communication. However, they do not appear to provide these children, who show a variety of disabling conditions, the same kind of access to activities that will develop their skills in the majority of other areas to as great an extent as do the preschool programs using the Expressive Arts curriculum. These are important findings to consider and may provide a rationale for those who advocate for the importance of year-round schooling, especially for those children most at risk of developmental problems.

Growth In Families' Knowledge and Abilities

Site teachers kept families informed of classroom Expressive Arts activities by sharing with families the child portfolios, videos of children engaged in art experiences, and computer slide shows of children's art work using *Kid Pix*. Families used art activities more at home after observing in the classrooms, reading information in the newsletters, filling out questionnaires, or participating in *ARTtache'* activities. In one set of interviews by an independent evaluator, parents knew less than teachers about the goals of the project, but they were universally positive about the effects. Several parents had been involved in most of their child's classroom activities and described a wealth of art activities that teachers used in classrooms. Most parents felt that the benefits of the project came in self-expression and improvement in self-confidence. *"It helps her realize she shouldn't be afraid to experiment. She's learned to make lots of things, to do things with shapes and textures and colors. It gives her a 'go for it' attitude. A way to express her will."* Another noted, *"It's one of the best ways to tell what he thinks and feels."* One parent commented, *"She's a lot more open. Yes, it's definitely connected to the project. She uses her imagination more."* One parent confessed that she had not wanted to do art activities before with her child

because *"I was so worried about messy things."* But the project staff and teachers worked with her and, *"They said 'that's part of the fun.' and didn't care about the mess at all. They helped me relax. That's hard to do at home when you're alone—They (the staff) support you."*

Growth In Teachers' Knowledge and Abilities

As part of the evaluation procedure, the teachers rated their own general knowledge and specific skills about areas that related to implementing the Expressive Arts curriculum. In addition to the teachers' self evaluations, the Expressive Arts Project staff who periodically visited the classrooms also evaluated the teachers on the same measures. In the majority of cases, the teachers tended to give themselves higher ratings of knowledge than did the outside observers. This may be because the teachers knew that they knew certain information, even if they were not applying it in the classroom, while the observers could only code behaviors they saw the teachers actually implementing. The outside observers rated only two of the teachers higher than they rated themselves.

Comparing the double ratings of the teachers' knowledge base provided some solid evidence of growth in teachers' knowledge and skill levels over the course of the Expressive Arts Project. Regardless of how the teachers rated themselves, when **both** the teachers' self-evaluations **and** the observers' ratings of the same teacher showed improvement over the course of the year, reliability is increased since two independent raters arrived at the same conclusion.

As might be expected, some teachers started out with higher levels of expertise than others. Some teachers started with little knowledge in an area and showed spectacular growth over the course of the project, while other teachers were at near-ceiling levels already, and had little room to improve. Regardless of these differences, the teachers overall showed gains in knowledge over the course of the project, regardless of whether the rating was done by themselves or by outside evaluators. Statistical tests {two-tailed t-tests on the teachers' pre-and post-test competencies showed that the teachers as a whole showed **highly significant** increases in their knowledge levels over the course of the year, $t = -8.184$ $(29df)(p<.001)$}. This supplies additional proof that the teachers were becoming more and more skilled at implementing the Expressive Arts curriculum

in their classes over the course of the year and helps to explain the impressive levels of growth shown by the children.

An independent evaluator interviewed field site teachers and reported that in the beginning, some teachers saw the arts as *"frivolous."* That is no longer the case. They now recognize the importance of child-directed art activities. As the project progressed, with the exception of teachers who already provided many art activities, teachers reported that they increased art activities *"much more,"* and one teacher said, *"They showed what works. I learned to appreciate it, and I'm in control of how to use it with my kids. Art decorates the room. I don't have to do bulletin boards anymore. The children supply their own artwork."*

In commenting on EA's impact on cognition and communication, a teacher of children with multiple disabilities said, *"We used to do a lot of hand-over-hand craft activities. We have found that the children can do more than we gave them credit for. Also, Cathy knows which works of art are hers. She will go and take a new person over to see her artwork. She is quite proud of her work."* An example of the effects of EA activities on children's cognitive skills was demonstrated when art activities were part of a classroom's extended study of caterpillars. Several children drew segmented bodies and the spines along the body, talked with each other about what they were drawing, then made up stories about their caterpillars.

Project Impact

Products

Print and video materials, described in the sections which follow, were developed during the Expressive Arts Project's 3 year model development and 2 year field testing periods.

Printed materials. *ArtExpress*, the Expressive Arts Project's 207-page curriculum manual, demonstrates how expressive art activities can be used across curriculum domains for all children in early childhood classrooms. *ArtExpress* contains 12 chapters plus references, appendices, and an index. Chapter titles include: An Overview of *ArtExpress* and Young Children, Children and the Arts, The Adult Roles, Structuring the Art Environment for Learning, The Visual Arts, Music and Movement, Dramatic Play, Integrating the Arts into Early Childhood Experiences,

Adapting Materials, When Families Participate, Assessment, and Resources. Ways to adapt activities, making the arts accessible to children with disabilities, using both high and low tech devices, are clearly illustrated. The expressive arts provide opportunities for inclusion, allowing children with disabilities to participate in creative activities in regular classroom settings. Using developmentally appropriate practices, along with incorporating the learning cycle, *ArtExpress* provides suggestions for ways to incorporate activities in the visual arts, music and movement, and dramatic play. Also included are examples of integrated curriculum ideas based on child interest and suggestions for planning activities for the many different stages of development found in the classroom. Suggested equipment and resource listings are also provided.

The *Family and Child Art Activity Ideas* booklet contains information to educate families to the importance of the arts for young children. Ideas to try at home, along with suggested materials and recipes are provided in the booklet, which can serve as a means for families and children to enjoy continued involvement in expressive arts.

Training Videos for Families and Staff. Observational Learning tapes are available for staff and families who have children who could benefit from observing other children involved in expressive art activities. A series of three tapes centered around the visual arts include *Children Drawing* (18.50 minutes); *Children Painting* (32.50 minutes); and *Children Making Collages* (23.35 minutes). Each video shows children involved in the listed art activity as a way to provide peer modeling.

The Arts: A Springboard for Learning, an hour -long video, originally broadcast for APPLES Magazine, a part of Illinois' Regional Technical Assistance System, features Expressive Art Staff members discussing implementation of the model. The video examines the importance of the arts in education. Examples of children's art projects and adaptive devices are demonstrated. Video clips of children participating in the Expressive Arts' child-initiated, activity-based art curriculum are shown.

A Case Study of the Expressive Arts in Action is a 20-minute video that documents the growth of two children who participated in the Expressive Arts Model. Footage of the children

experiencing a variety of activities is shown. The video emphasizes how the expressive arts can be used to achieve goals and objectives across curriculum domains.

Video Overview of the Expressive Arts Model, a 15-minute video, is available to staff and families wanting to learn more about the Expressive Arts Model. Footage includes children participating in a variety of expressive art activities using the necessary adaptations. Information about the goals and objectives of the model are presented.

Software. Software based on thematic units from the Industry demonstration sites was created using *HyperStudio*. The children contributed computer art they had drawn using *HyperStudio* graphics tools. Their creations *Things We See, Field Trips*, and *School Tour* are available to share with Expressive Arts replication classrooms.

An interactive CD-ROM, entitled *Artspace,* was developed by Macomb Projects. Expressive Arts Demonstration sites collaborated with the development of this product. The program recreates a trip to a museum consisting of an Adult Gallery, Children's Gallery, and a Studio. Children from the demonstration sites contributed images to the Children's Gallery and video footage for the Children's Gallery and The Studio.

Availability. The Expressive Arts Project products are available from Macomb Projects, 28 Horrabin Hall, 1 University Circle, Western Illinois University, Macomb, Illinois 61455. Order a catalog by calling 309/298-1634. The Web site address is www.mprojects.wiu.edu.

Dissemination Activities

Expressive Arts Project staff have disseminated materials including brochures, product lists, newsletters, articles, and videotapes by mail, news releases, a home page on Macomb projects Web site (www.mprojects.wiu.edu), and electronic bulletin boards. Staff have also given numerous presentations on the expressive arts at Local, State, Regional, and National conferences, meetings, and inservices sponsored by various agencies. *ArtExpress* and articles about aspects of the expressive arts were among the Project's publications. Lists of presentaions and publications follow.

1997 Presentations

- *Preschool Children with Disabling Conditions Show a "Summer Slump" in Learning When Not Enrolled in Preschool During the Summer.* Kappa Delta Pi 41st Biennial Convocation, St. Louis, MO: November 8, 1997. (5 people impacted)
- *Technology Brings the Expressive Arts to All.* Closing the Gap Conference, Minneapolis, MN: October 23, 1997. (50 people impacted)
- *I Can Do It—You Can Too! Make the Arts Accessible for All Children.* Sharing the Vision Conference, Springfield, IL: October 10, 1997. (20 people impacted)
- *Expressive Arts Family Night.* New Parent Program, MacArthur Preschool, Macomb, IL: March 6, 1997. (15 parents and 18 children impacted)
- *The Expressive Arts: Essential Tools for Learning.* Illinois Association for Supervision and Curriculum Development Kindergarten Conference, Arlington Heights, IL: February 28, 1997. (40 people impacted)
- *I Can Do It—You Can Too! Make the Arts Accessible for All Children.* Capitol Area AEYC, Springfield, IL: February 15, 1997. (20 people impacted)

1996 Presentations

- *Exploring ArtSpace.* F.A.T.I.C. Conference, Orlando, FL: February 15, 1996.
- *Exploring ArtSpace.* ACTT VII Annual Conference, Macomb, IL: March 15, 1996.
- *Crunchy, Gooey, Squishy, Squirmy.* STARNET's One Hundred Languages of Children Workshop, Macomb, IL: August 1, 1996. (25 people impacted)
- *Expressive Arts: Essential Tools for Learning.* Midwest AEYC, Lincoln, NE: April 20, 1996. (50 people impacted)
- *Express Yourself: A Panel Discussion about Expressive Arts in Early Childhood Settings.* ACTT VII Conference, Macomb, IL: March 15, 1996. (15 people impacted)
- *What Can You Do With Spiders and Ducks?* ACTT VII Conference, Macomb, IL: March 14, 1996. (20 people impacted)
- *The Expressive Arts: Essentials Tools for Learning.* Capitol Area AEYC, Springfield, IL: February 3, 1996. (125 people impacted)

1995 Presentations

- *Exploring ArtSpace.* Technology, Educational Media Materials Conference, Arlington, VA: November 2, 1995.
- *Exploring ArtSpace.* Closing the Gap Conference, Minneapolis, MN: October 20, 1995.
- *Building on Your Understanding of the Reggio Emilia Approach.* STARNET, Peoria, Illinois: November 10, 1995. (30 people impacted)

- *The Arts in Early Childhood: A Springboard for Learning.* APPLES Magazine, Macomb, IL: March 15, 1995. (112 people impacted; 99 viewing broadcast live, 11 video rentals, 2 videos purchased)
- *Exploring ArtSpace.* ACTT VI Conference, Macomb, IL: March 16-17, 1995. (20 people impacted)
- *Moving into Music.* ACTT VI Conference, Macomb, IL: March 16-17, 1995. (30 people impacted)
- *The Arts: A Great Place to Start.* Project APPLES, Marquette School, Champaign, IL: January 8, 1995. (23 people impacted)

1994 Presentations

- *Making the Expressive Arts Work for You!* Child Care Connection Workshop, Peoria, Illinois: November 12, 1994. (30 people impacted)
- *Technology and the Expressive Arts: A Natural Partnership* Closing the Gap, Minneapolis, MN: October 21, 1994. (100 people impacted)
- *Encouraging Mark-Making.* Closing the Gap, Minneapolis, MN: October 20, 1994. (50 people impacted)
- *Am I Doing the Right Thing in My Classroom?* Illinois Education and Technology Conference, Peoria, IL: October 6, 1994 (15 people impacted)
- Presentation and Demonstration of children's computer graphics programs, with adaptations for young children with disabilities. WIAEYC Kiddie Carnival, Macomb, Illinois: April 30, 1994. (20 people impacted)
- *Art and Technology: A Natural Partnership*, ACTT V Conference, Macomb Projects, WIU, Macomb, Illinois: March 17-18, 1994. (15 people impacted)
- *Weaving a Rainbow: Weave Technology into Your Curriculum*, ACTT V Conference, Macomb Projects, WIU, Macomb, Illinois: March 17-18, 1994. (15 people impacted)
- *Expressive Arts for Young Children with Disabilities*, lecture and demonstration of low-tech adaptive devices to make the visual arts accessible to young children with a wide range of disabilities, WIU, Art 461 class, Sally Colburn-instructor: Macomb, IL: February 27, 1994 and March 1, 1994 (10 people impacted)

1993 Presentations

- *Need for Accessibility to the Arts for the Physically Challenged Child*, Keynote address. Joy of Learning for Everyone, Leisure and the Arts Through Assistive Technology Conference. Edmond, OK: July, 27, 1993.
- *Youngsters Utilize Computers through Art,* Joy of Learning for Everyone, Leisure and the Arts through Assistive Technology Conference, Edmond, OK: July 27, 1993.

- Presentation and Demonstration of the *Florida Music Mat* at WIAEYC Kiddie Carnival, Macomb, IL: April 24, 1993. (30 people impacted)
- *Expressive Arts for Young Children with Disabilities*, lecture and demonstration of high-tech and low-tech adaptive devices to make the visual arts accessible to young children with a wide range of disabilities, W.I.U., Art 461 class, Allen Schindle-professor: Macomb, IL: March 30, 1993. (15 people impacted)
- *Makin' Music with Your Feet*, ACTT IV Conference, Macomb, IL: March 19, 1993.
- *Visual Arts Adaptations*, ACTT IV Conference, WIU, Macomb, IL: March 18-19, 1993. (40 people impacted)

1994 - 1997 Publications

Hutinger, P., Betz, A., Bosworth, J., Potter, J., & Schneider, C. (1997). *ArtExpress: A curriculum for young children with disabilities*. Macomb, IL: Macomb Projects.

Potter, J. (Fall, 1997). Import a child's photograph on *KidDesk*. *ACTTive Technology, 12* (4), 4.

Potter, J. (Fall, 1997). Create a portfolio with *Kid Pix* SlideShow. *ACTTive Technology, 12* (4), 12.

Betz, A. (Summer, 1997). Have fun with busy tunes in *BusyTown*. *ACTTive Technology, 12* (3), 14.

Betz, A. & Bosworth, J. (Spring, 1997). Using software to integrate music into your classroom curriculum. *ACTTive Technology, 12* (2), 10.

Potter, J. (Spring, 1997). Children with disabilities use new creative drawing tool and computer for art. *ACTTive Technology, 12* (2), 4.

Betz, A. (Winter, 1997). Picture this song—Software review of *Making Music*. *ACTTive Technology, 12* (1), 11.

Robinson, L. & Schneider, C. (Winter, 1997). Why use a switch or TouchWindow? *ACTTive Technology, 12* (1), 1, 3.

Hutinger, P., Betz, A., & Cunningham, L. (1996). *A curriculum to accompany ArtSpace: Museums, galleries, artists and a studio*. Macomb, IL: Macomb Projects.

Betz, A. (Fall, 1996). Take a musical adventure with Lamb Chop. *ACTTive Technology, 11* (4), 16.

Bosworth, J. (Fall, 1996). Look, I found a bug. *ACTTive Technology, 11* (4), 19.

Betz, A. & Potter, J. (Summer, 1996). Swing into action. *ACTTive Technology, 11* (3), 13.

Betz, A. & Potter, J. (Spring, 1996). What can you do with spiders and ducks? *ACTTive Technology, 11* (2), 12.

Betz, A. & Potter, J. (Spring, 1996). Makin' music for everyone *ACTTive Technology, 11* (2), 3.

Bosworth, J. (Spring, 1996). Building access bridges with help from technology. *ACTTive Technology, 11* (2), 1.

Betz, A. & Potter, J. (Winter, 1996). Low-tech adaptations for art activities. *ACTTive Technology, 11* (1), 19.

Schneider, C. & Robinson, L. (Fall, 1995). *Thinkin' Things* with *Ke:nx*. *ACTTive Technology, 10* (4), 13.

Schneider, C. (Fall, 1995). Packing and moving computer equipment. *ACTTive Technology, 10* (4), 7.

Betz, A. (Winter, 1995). Screen saver and so much more. *ACTTive Technology, 10* (1), 14.

Potter, J. (Winter, 1995). Exploring music and math concepts. *ACTTive Technology, 10* (1), 13.

Hutinger, P. & Johanson, J. (Summer, 1994). The expressive arts for young children with disabilities. *OSERS News in Print 6* (3), 36-42. Washington D.C.: Department of Education and Rehabilitative Services.

Betz, A. (Spring, 1994). Sing along with Fripples. *ACTTive Technology, 9* (2), 13.

Schneider, C. (Spring, 1994). Creating a *Ke:nx* setup for Fripples. *ACTTive Technology, 9* (2), 10-11.

Implications of Findings

One of the most important characteristics of the arts and the EA model is the potential for providing experiences that represent inclusion for youngsters with disabilities. The arts provide a vehicle to involve children in activities, *because they participate willingly*. Surprisingly, in a group of 322 children with mild to severe disabilities, *none refused to participate*. Clearly this is not the case with other preschool program areas such as 'circle time,' 'story time,' or 'housekeeping.' Families and staff discovered through the Expressive Arts Project that children with disabilities *can* (and do) participate in activities in the arts carried out "regular" classrooms.

The adaptations developed by the project, both low tech and high tech, are a contribution to early childhood programs and families. Feedback from staff and families on the low tech adaptations EA indicates both practicality and usefulness. Using high tech technology such as computer graphics software and appropriate peripherals reflects a useful adaptation for children with severe physical disabilities, "leveling the playing field."

The arts provide a curricular element that leads to improvements in children's behavior, and implication that justifies time spent engaged in the EA model in early childhood classrooms. Art is not "something to do when there's nothing else to do.' It is an important part of the curriculum. When children are engaged in the EA model, they make consistent improvement in other areas, including cognition, communication skills, social skills, fine motor, gross motor, and specific areas related to the visual arts. Improvement occurs in spite of differing ages, differing disabling conditions, and differences in initial skill.

Future Activities

The Expressive Arts Project received Oureach funding beginning October 1, 1997. The primary goal of Expressive Arts Outreach (EAO) is to train others to integrate developmentally appropriate experiences in the expressive arts, with an emphasis on visual arts, into early childhood programs for children ages 3 to 8 with a wide range of disabilities. A secondary goal is to enhance the knowledge and skills of families, professional staff, and early childhood decision-makers so they can effectively use developmentally appropriate art activities and adaptations. The third goal is to serve as a national resource and information exchange for art related materials and products.

By accomplishing our objectives, we will create a greater awareness of the benefits of expressive arts for young children with disabilities and will establish sites throughout the country where trained professionals provide young children with disabilities opportunities to benefit from the *ArtExpress* curriculum and philosophy.

Target agencies for EAO services are sites that serve children with disabilities that range from mild to severe, and/or high-risk children, from 3 to 8 years of age that are housed in private agencies, public schools, medical settings, public health settings, rehabilitation centers, or public agencies. The model is likely to be replicated in public school settings or other inclusive settings such as nursery school, day care, and Head Start. Delivery systems may be home based, center based, a combination of the two, or consultative.

EAO staff plans to increase awareness of Expressive Arts model among professionals and society and serve as a national resource and information exchange for art related materials and products. This will be done through presentations and dissemination of brochures, product lists, articles, videotapes, electronic bulletin boards, satellite broadcasts, and the Macomb Projects' Home Page (www.mprojects.wiu.edu).

Assurance Statement

As required, copies of this full final report have been sent to the Department of Education and to ERIC. Copies of the title page and abstract from this final report have been sent to NEC*TAS, the National Clearinghouse for Professions in Special Education, NICHCY, the Technical Assistance for Parent Programs Project, the National Difffusion Network, the Child and Adolescent Service System Program, the Northeast Regional Resource Center, the MidSouth Regional Resource Center, The South Atlantic Regional Resource Center, the Great Lakes Area Regional Resource Center, the Mountain Plains Regional Resource Center, the Western Regional Resource Center, and the Federal Regional Resource Center.

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